AD-778 844

TEST OF AN AXIAL COMPRESSOR STAGE DESIGNED FOR A TOTAL PRESSURE RATIO OF THREE TO ONE

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January 1974

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REPORT DOCUMENTATION PAGE

READ INSTRUCTIONS BEFORE COMPLETING FORM

1. REPORT NUMBER: ARL 74-0001	2. GOVT ACCESSION NO.
3. RECIPIENT'S CATALOG NUMBER: AD 778844	
4. TITLE (and Subtitle): TEST OF AN AXIAL COMPRESSOR STAGE DESIGNED FOR A TOTAL PRESSURE RATIO OF THREE TO ONE	5. TYPE OF REPORT & PERIOD COVERED: Technical
	6. PERFORMING ORG. REPORT NUMBER
7. AUTHOR(s): A. J. Wennerstrom, G. R. Frost, R. D. DeRose	8. CONTRACT OR GRANT NUMBER(s): Internal
9. PERFORMING ORGANIZATION NAME AND ADDRESS: Fluid Dynamics Facilities Rsch Lab, Aerospace Research Laboratories (AFSC), Wright-Patterson AFB, Ohio 45433	10. PROGRAM ELEMENT, PROJECT, TASK AREA & WORK UNIT NUMBERS: DoD Element 61102F, Project 70650409
11. CONTROLLING OFFICE NAME AND ADDRESS: Aerospace Research Laboratories (LF), Air Force Systems Command, Wright-Patterson AFB, Ohio 45433	12. REPORT DATE: January 1974
	13. NUMBER OF PAGES: 434
14. MONITORING AGENCY NAME & ADDRESS(if different from Controlling Office)	15. SECURITY CLASS. (of this report): Unclassified
	15a. DECLASSIFICATION/DOWNGRADING SCHEDULE

16. DISTRIBUTION STATEMENT (of this Report)

Approved for public release; distribution unlimited.

17. DISTRIBUTION STATEMENT (of the abstract entered in Block 20, if different from Report)

18. SUPPLEMENTARY NOTES

19. KEY WORDS (Continue on reverse side if necessary and identify by block number)

axial compressor
turbine engines
turbomachinery
gas turbines

20. ABSTRACT (Continue on reverse side if necessary and identify by block number)

Complete experimental results are presented from tests of a supersonic axial-compressor stage designed for a tip speed of 1600 ft/sec, a stage total pressure ratio of 3.0 and an inlet hub/tip radius ratio of 0.75. At design speed, the compressor passed 70 percent of design flow, achieved a stage total pressure ratio of 2.25, and achieved isentropic efficiencies of 0.74 for the rotor and 0.61 for the stage. This poor performance was

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attributed to an excessive increase of rotor deviation angle as rotor deviation angle as rotor incidence increased at part speed. A proposed solution to this problem is described.

PREFACE

This report was prepared by Dr. Arthur J. Wennerstrom and Captain George R. Frost of the Fluid Dynamics Facilities Research Laboratory, Aerospace Research Laboratories, Wright-Patterson Air Force Base, Ohio, and Mr. Robert D. DeRose of Systems Research Laboratories, Inc., Dayton, Ohio.

The report presents results from a portion of the effort of the Fluid Machinery Research Group, supervised by Dr. Arthur J. Wennerstrom, conducted under Work Unit 09 of Project 7065, "Aerospace Simulation Techniques Research," under the overall direction of Mr. Elmer G. Johnson.

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SECTION I

INTRODUCTION

This report presents the results of an experimental evaluation of the single stage supersonic axial compressor described in Reference 1. This compressor was designed for an over-all stage total pressure ratio of 3 to 1 at an isentropic efficiency of 82 percent. Design tip speed was 1600 ft/sec at standard conditions and the inlet hub/tip radius ratio was 0.75. There were no inlet guide vanes.

The compressor tested was designed for diffusion levels beyond the range of past experience in both rotor and stator. This choice was deliberate in order to provide a suitable test bed for the evaluation of boundary layer control devices applicable to a compressor and to obtain data at values of Diffusion Factor above 0.5. As initially tested, no boundary layer control devices were installed in the compressor. It was not anticipated that design goals would be met with the initial configuration, and indeed they were not.

The second section of this report describes the test facility flow path, the compressor test vehicle, and the complete instrumentation system. Section III describes the procedures used in taking data and subsequently in reducing the data. The results of the test are presented in Section IV. Section V, the last section, summarizes the conclusions drawn from the data and indicates the choice made for the first configuration modification.

SECTION II

APPARATUS

1. FACILITY FLOW PATH

The test facility used is of the open-loop variety. It is schematically shown in Figure 1. Air enters the facility through a filter designed to remove five micron particles with a 99.5 percent efficiency. The air then passes through a 30-inch duct to a Dall Flow Tube located about six pipe diameters downstream. About two pipe diameters further downstream, the air is turned 90 degrees with the aid of turning vanes and then passes through a perforated plate designed to reduce inlet pressure approximately three psi at 24 lb/sec flow at standard atmospheric conditions. Following this, the air passes through a tube bundle and subsequently enters a 48-inch diameter settling chamber. The settling chamber contains a perforated conical flow spreader and two screens patterned after the model investigation reported in Reference 2. From the settling chamber, air enters the compressor through a direct-coupled bellmouth. Air leaving the compressor is deflected radially outward to a peripheral throttle. The throttle consists of one stationary and one rotating cylindrical ring, each with 16 circumferentially distributed matching holes. Throttling takes place at a diameter of approximately 47 inches. Downstream of the throttle, the flow enters a collector, from which it is passed through a 24-inch duct to a silencer, and back to the atmosphere. A fast-acting poppet type valve, bypassing the throttle valve, is also available to relieve surge conditions. A cutaway drawing of the complete test facility is shown in Figure 2.

2. COMPRESSOR TEST VEHICLE

A cross section of the research compressor is shown in Figure 3. The design employs a cantilevered rotor supported by four 0.5-inch thick bearing support struts with leading edges located about two stator chord lengths downstream of the stator trailing edge plane. The rotor tip diameter at the leading edge is nominally 18 inches. Oil seals are controlled gap carbon seals with an air barrier. No oil leakage into the flow path has ever been experienced. Cold rotor radial tip clearance with the rotor at rest is .037 to .039 inch. Hot clearance at design speed is predicted to be approximately .020 inch or about 0.6 percent of the mean rotor chord. The rotor shaft is mounted on ball bearings. Radial runout does not exceed .0005 inch. The bulletnose and inlet hub flow path are supported by six bi-convex struts in the inlet. The flow area contraction ratio between the trailing edge plane of the struts and the leading edge plane of the rotor is 2.72 to 1. Surface finish on all surfaces adjacent to the flow upstream of the bearing

support struts is 32 microinches or better. An abradable coating has been employed in the casing adjacent to the rotor tip. However, no rubs have been experienced, even in stall. The rotor is of integral construction, the blades and disc being machined from a single forging of 6Al-4V titanium. The stator blades are individually inserted but are machined integrally with platforms at hub and tip. The gap between adjacent platforms lies in the range of 0 to .002 inch. A photograph of the rotor is shown in Figure 4. Photographs of stator blades are shown in Figure 5.

3. COMPRESSOR INSTRUMENTATION

Aerodynamic instrumentation in the compressor consists of measuring points in stator leading edges for total pressure and temperature, rakes downstream of the stators for total pressure and temperature, a large number of static pressure taps distributed on the inner and outer flow path and on the surface of one pair of stator blades, and dynamic wall pressure measurements made over the rotor tip. Measurements of inlet total pressure and temperature, mass flow, relative humidity, and rotor speed are accomplished outside of the compressor and are discussed in paragraph 4 of Section II. The Supersonic Compressor research vehicle has a total of 133 sensors measuring aerodynamic parameters at various points throughout the stage. Refer to Figure 3 and Table 1 for specific locations. Some of the static pressures are sensed at more than one point and are manifolded to become, in each case, a single measurement. Figure 6 shows the vehicle instrumentation bulkhead.

a. Temperature Measurements

(1) Location

A total of thirty-nine Chromel-Alumel thermocouples are used to sense temperature. Four are mounted in the plenum, ten are mounted in the vane leading edges and twenty-five are located in the five discharge plane rakes. The vane leading edge and the rake mounted thermocouples are of the slot vented probe type (Figures 7, 10.a., and 11). A detailed analysis of the features of the slot vented design, along with recovery factor characteristics, may be found in Reference 3. The rakes were designed with the sensors dividing the discharge annulus into equal radial increments while circumferential spacing is on divisions equal to 2.2 times the distance between vane trailing edges. The single exception is one temperature rake which is misplaced three degrees circumferentially.

The ten stator leading edge thermocouple probes are mounted on four vanes with two vanes having two thermocouples and two vanes having three thermocouples. As with the discharge

rakes, these probes are also spaced to radially divide the stator annulus into five equal increments; however, in this case with two sensors per radius.

(2) Calibration

All thermocouples were fabricated from individually insulated, single rolls of Chromel and Alumel wire. Samples were taken periodically along the rolls as the thermocouples were made for vehicle installation. These sample thermocouples were calibrated against a model 162 platinum resistance bulb primary standard manufactured by Rosemount Engineering Company. A constant temperature oil bath, made by Lauda Division of Brinkman Instruments, Inc. was used as the heat medium. The bath was set at four different temperatures within the range of interest. The results, indicated in Table 2, show a worst case error of plus or minus 0.5°F at the highest temperature.

With thermocouples calibrated as indicated, the entire electronic system employed to record temperature data was examined. The results are shown in Table 3. Taking the worst case error, at the highest temperature, for both the thermocouples and readout system yields a maximum error of plus or minus 0.9°F. The more realistic RSS error goes from 0.23°F at 150 degrees to 0.65°F at 350 degrees. Finally, when recovery factor variation is added, the RSS error at 350°F becomes plus or minus 1.0°F. Figure 8 depicts the equipment used in the calibrations.

b. Pressure Measurements

(1) Location

Thirty-five static (PS) and thirty-five total (PT) pressures are measured in the vehicle flowpath. Twenty-five of the static taps are distributed at various points on the compressor flowpath liners. In particular, ten of these are located over the rotor blade tip, starting at 0.25 inch axially forward of the leading edge and following at 0.25 inch axial intervals extending downstream. A further ten statics are located approximately mid-chord radially on two vanes with seven suction side taps on one vane and three pressure side taps on the other.

The ten vane mounted total pressure probes are of the Kiel stagnation tube design (Figure 9) and are mounted with two sensors on each of two vanes and three on each of two other vanes. All are radially located to divide the annulus into five equal parts, with two measurements per radius. The other twenty-five are impact tubes mounted as five radial rakes of five sensors each, dividing the discharge annulus into equal increments and circumferentially spaced in a manner similar to that of the temperature rakes. An impact pressure rake is shown in Figure 10.b.

Located for use in conjunction with the static taps placed over the rotor blade tips are eight Kistler Model Number 603A pressure transducers and a Bentley Model 316 proximity detector. Because of problems observed at high speed with the Kistler dynamic pressure data, no further mention will be made of this system.

(2) Calibration

Four Statham strain gage type transducers are used to convert the various pressures into electrical signals for processing through readout and recording. One transducer is located in each of four, forty-eight port Scanivalve sequential pressure switching devices. The pressures to be sampled are connected to odd numbered ports while moderate vacuum is applied to all even (Roughing) ports to minimize hysteresis effects.

Three calibration pressures are sensed by all four Scanivalves on every scan. These are barometric, 15 PSIG and 30 PSIG. The 15 and 30 PSIG standards are supplied by Ametek Model PK-30 self-regulating, primary deadweight type, pressure standards referenced to atmosphere. The computer software used for data reduction corrects these two gauge values against variation in local barometric pressure and creates a new transducer calibration curve for every scan. Two absolute calibration pressures have been added to this system for use in future tests and the barometric calibration pressure has been eliminated.

c. Readout Electronics

Data is collected and recorded through use of a Hewlett Packard 2012B Data Acquisition System (DAS). This system is comprised of a 2911 guarded crossbar scanner, 2547A coupler, 2402A integrating digital voltmeter, 5050B digital recorder and a Kennedy 1506 incremental tape recorder.

As previously stated, pressure measurements are routed through four Scanivalve units using Statham transducers for conversion into electronic signals. A "Scanivalve" offers the advantage of using the same transducer to measure many pressures and lends itself to on-line calibration as described above. An interface unit was built to program the Scanivalves, along with other parameters, into the HP DAS in a manner which minimizes scanning time without compromising transducer settling time. Instead of sampling the same port on all valves sequentially before stepping to the next port, the digital interface causes each valve to move through its next roughing port to its next data point immediately after being interrogated. Each transducer then has an opportunity to settle out at its next test pressure while two others are sequentially interrogated.

This sequence is repeated until all ports are sampled. Approximately six seconds lapse for the entire procedure.

Thermocouple outputs are routed through a Kaye Instruments' Model K170 electronic ice point reference into the interface unit and then to the HP DAS.

4. TEST FACILITY INSTRUMENTATION

a. Rotor Speed

A Bentley Model 306 transducer senses six grooves machined into the gearbox/rotor driveshaft coupling. The output is fed into a Model 3115 proximitor for signal conditioning. The proximitor signal is a train of pulses having a repetition rate corresponding to rotor RPM/10. This repetition rate is directly recorded by the HP DAS. A Bentley Model 5030 digital tachometer provides a visual indication of rotor speed accurate to ten RPM. The tachometer also includes an adjustable speed limiting switch as a safety feature.

b Mass Flow

Inlet pressure is metered through a product series 122 Dall tube venturi manufactured by B.I.F. Industries with a 12.687-inch throat. Metering accuracy has been calibrated to plus or minus one-half percent by the manufacturer. Static pressure taps are located both in the throat and in the inlet cavity.

c. Inlet (Plenum) Total Pressure and Temperature

Compressor inlet total pressure is assumed equal to plenum static pressure just downstream of the last screen. Four static taps are manifolded into one pressure and recorded on two separate Scanivalves. The maximum error associated with this assumption is 0.06 percent. Temperature is sensed by four bare junction thermocouples located in the same axial plane as the pressure taps, and supported on two crossed cables.

d. Analog Compressor Mapping

An on-line plot of stage pressure ratio vs pseudo mass flow was effected through use of a Mosely Model 2FRA X-Y plotter. Teledyne pressure trandučers were used to sense stage inlet P01, stage exit P03 from a mid-radius stagnation tube and hub P1 (measured 0.25 inch upstream of the rotor). Operational amplifiers were used to ratio exit P03 to inlet P01 and also to ratio hub P1 to inlet P01. Stage pressure ratio was used to excite the Y-axis while 1 - (P1/P01) was sent to the X-axis. The approximate compressor map so obtained was used to select a reasonable distribution of throttle settings at which to record detailed data.

e. Relative Humidity

A Foxboro Dewcel Model 2711TG-K222 was mounted in the inlet stack to monitor humidity. This device continuously measures the moisture content of the air by sensing the temperature at which the partial pressure of its water vapor is equal to the water vapor pressure of a saturated salt solution. The humidity information is acquired by the DAS as a thermocouple reading on every test run and subsequently treated in the Phase I data reduction program.

SECTION III

TEST PROCEDURE AND DATA REDUCTION

1. TEST PROCEDURE

Test data was taken in order of increasing speed, each speed-line being entirely probed before any data at higher speed was acquired. The on-line analog x-y plot capability discussed in paragraph 4.d. of Section II was used to select the test points, since on-line data reduction was not available.

For each speedline, test data was first acquired at a partially-closed exhaust throttle setting, after which the compressor was gradually throttled to induce stall. After recovery, data was taken at several points as the throttle was opened from near-stall to wide-open. Stall was indicated by two sources: the dynamic pressures across the rotor tip, which were displayed on oscilloscopes on the test operator's console, and a microphone in the plenum. Sudden oscillations of the above-mentioned x-y plotter were further indicators that stall had occurred.

Data was acquired at the rate of about one speedline per hour. On dates when elevated speed lines were investigated, a single test point at each of several lower speeds was taken to assure data integrity by comparison to previously-acquired data at these lower speeds.

Prior to each test, an atmospheric pressure reading was obtained from a mercury barometer at the test site. The rig was initially brought up to speed and then monitored for about ten minutes, when it was assumed equilibrium had been reached. A five-minute dwell at each throttle setting was observed prior to data acquisition. One data scan per test point was acquired for speeds below 90 percent, with two scans per point at 90 and 100 percent design speed.

A 12-character test identification number was manually assigned to each test point and acquired by the DAS as the first item of information during data acquisition at that point (character 1: last digit of year; characters 2-3: numerical month; characters 4-5: numerical day of month; characters 6-7: test point number on that particular date; characters 8-10: numerical throttle setting; characters 11-12: last two digits of the nominal percent-speed (e.g., 82% = 82; 100% = 00)). Where two scans were taken at a particular test point automatically, each scan bears the same test identification number.

A spike in the facility vibration signature corresponded to 80 percent corrected design speed on the date this data was to be acquired. This required an increase to 82 percent of design speed before vibrations were judged adequate for continuous running and data acquisition purposes.

Finally, a listing of all raw experimental data which was acquired during testing of this stage is provided in Appendix D and all computer input data used for Phases I and II of the data reduction is provided in Appendix B.

2. DATA REDUCTION - PHASE I

Phase I reduction of the test data was accomplished using a slightly modified version of the computer program described in Reference 4. One of the equations of that reference, and the associated computer coding, is in error; hence several input and output data changes were made.

The erroneous equation is Equation 18, which is used to correct the measured mass flow for standard inlet conditions. The correct relationship is

$$W_C = W \cdot \frac{P_{std}}{P_{01}} \cdot \sqrt{\frac{T_{01}}{T_{std}}}$$

This requires a modification to card CALC 266, which should read

```
WCORR (I) = WACT (I)/FAC2 * SQRT(FAC1)
```

The experimental data was acquired on magnetic tape, but in different format from that described in Reference 4. The twelve characters of each data item were recorded in two ten-character computer "words," the first consisting of seven leading zeroes (or blanks) and the first three data characters, the second consisting of a leading blank and the final nine data characters. A special subroutine (TPRED) was written to accommodate this data configuration and allow for high-speed data transmittal from tape to computer. A call to this subroutine replaces cards MAIN 52-53 in the main program, and also appears in subroutine INPUT, a current listing of which appears in Appendix C, as does a listing of Subroutine TPRED.

Other changes in Subroutine INPUT (Program INPUT, in this use, since the overlayed version of REDUC was used) reflect changes in the instrumentation configuration from the time the program was published until the vehicle was tested. These changes are briefly discussed below.

Three additional types of pressure data were available at the time the vehicle was tested, which required extensions of data items "L1" and "ITPR" of Program REDUC, as follows:

<u>L1</u>

L1 = 14	Flowpath static pressure between blade rows
L1 = 15	Flowpath static pressure just upstream of rotor
L1 = 16	Atmospheric pressure

<u>ITPR</u>

Data Type (See L1)	Sequence of Channel Codes in Array ITPR
L1 = 14	Similar to L1 = 7
L1 = 15	Similar to L1 = 7
L1 = 16	Any sequence

The pressure calibration system (described in Section II.3.b.(2)) required a modification to the program of Reference 4 also. A new input item, IATGG, was added just prior to item PSI, the array of calibration pressure magnitudes, to indicate whether each such pressure was an absolute or gauge (relative to atmospheric) measurement (IATGG = 0, absolute; IATGG = 1, gauge).

The magnitude of rotor wheel speed was provided as RPM divided by ten, rather than in cycles per second as anticipated in Reference 4. This required a slight change in the relevant computer coding in Subroutine INPUT.

Only minor modifications to other routines were required in program REDUC. The number of data acquisition channels is now required on the first data card as well as in the "Instrumentation Data Deck." This is to allow the program user to select the data-skip option if he so desires.

Minor additions and changes to the format of the output data were also made. The version of Subroutine OUT used in the presentation of this data is listed in Appendix C.

3. DATA REDUCTION - PHASE II

Phase II reduction of the test data was accomplished using a modified version of the computer program described in Reference 5. The important elements of the modifications are described in this section.

Two erroneous FORTRAN statements were detected during the data reduction, necessitating revision of cards U2 1849 and U2 1862. Respectively, these cards should read

```
IF (NCALC(I+1).LE.1.OR.IC1.GT.2) GO TO 600

IF (X2.EQ.O.) GO TO 584
```

It was found necessary to strictly control the manner in which extrapolations were made from the experimental data toward each flowpath boundary. This control was achieved through use of a new input item NEX (NEX = 0, the radial gradient between the last two data points nearest a wall is extrapolated linearly to the wall; NEX = 1, the data value at the outer casing is assumed to have a value midway between the value it would have with NEX = 0 and the value of the data point nearest the wall; NEX = 2, the data at both hub and case is extrapolated as with NEX = 1). The coding associated with the implementation of this option is presented in Appendix C, where Program C2 as modified is presented.

In many cases, it was also found necessary to change the manner in which deviation angle is specified within the blade in order to obtain converged through-the-blade solutions. Rather than specifying rotor deviation chordwise as a percent of trailing edge deviation, as suggested in Reference 5, the program was modified to treat data item RDEV as an absolute angle, in degrees. This required a modification to card U2 1961, which becomes

```
TANR(J) = TAN(ATAN(TANA(J)) + XX3(J)/C1)
```

Another change in the computational scheme involves the limiting of the range of allowable blockage estimates when analyzing data by iterating on casing static pressure measurements. Without such restraints, the program may increase or decrease blockage to unrealistic levels in an attempt to compute static pressures which match the measured casing static pressures. The boundary layer and wake blockage was constrained between 0. and 30 percent by two cards,

```
IF(BLCKGE(I).LT.0.0) BLCKGE(I)=0.0

IF(BLCKGE(I).GT.0.3) BLCKGE(I)=0.3
```

inserted between cards U2 2130 and U2 2131.

A similar change involved the establishment of a minimum allowable level of computed static temperature. This required modification of two subroutines:

<u>E2</u>

```
      Q = FF1(TIN)/1.25          U2 1982A

      IF (XZ.GE.Q) GO TO 228     U2 1985A
      XZ = Q                     U2 1985B
  228 CONTINUE                   U2 1985C
```

<u>I2</u>

```
      X2 = FF1(TIN)/3.0          U2 2126A
      IF(X1.LT.X2) X1 = X2       U2 2126B
```

A jump statement was required in Program C2 because the corrections to the measured thermocouple data in the stage discharge plane are made during the Phase I data reduction. This statement, inserted between cards U2 1569 and U2 1570, is illustrated in the listing of Program C2 (Appendix C).

A jump statement was also used in Program B2X to skip the read-in of flow angle data in the stage discharge plane, since no such test data is available. This statement, and related coding changes, are presented in the listing of Program B2X (Appendix C) in the vicinity of card U2 1425.

The static pressure at the stator trailing edge was defined as equal to the static pressure at the downstream instrumentation plane in the program in order to obtain more realistic computed static pressures across the stator. The related coding appears near cards U2 1441 and U2 1452 (Program B2X).

Also presented in the listing of Program B2X is the deck re-ordering which was utilized in the multiple-data-set reductions whereby the final streamline pattern of the previous data set may be used as a first guess of the streamline pattern for the subsequent set. This option (new input item NSAVE = 1) resulted in significant savings of computer time in multiple-set reductions.

Several new convergence and diagnostic aides have been incorporated into Program D2. Among the more significant of these changes is one which involves a skip of the continuity sums until the momentum equation sums have nearly converged. Other changes are presented without comment in the listing of Program D2, which appears in Appendix C.

Three other program modifications were made, one essential and two merely convenient. In several instances, it was found necessary to change the damping factor $\frac{K'}{8}$ in the "streamline relaxation factor" (Reference 5) in order to obtain converged solutions within a reasonable number of iterations. A new input data item DAMPF was devised whereby, if DAMPF is other than zero, $\frac{K'}{8}$ becomes $\frac{K'}{DAMPF}$. The associated computer coding is illustrated in Program D2 (Appendix C) in the vicinity of card U2 1897.

The "convenient" changes referred to in the above paragraph are in regard to producing on-line plots of the Phase II data reduction. Data input items PLOWER and PSCALE were added to allow the program user to set the vertical axis minimum and scale, respectively, of the axial static pressure plot. Furthermore, the plot of stator incidence was constrained to have a maximum spread of twenty-eight degrees. Thus the plots of stator incidence referred to in the "Results" section of this report must be considered appropriately.

The new data items PLOWER, PSCALE, DAMPF, NSAVE, and NEX described above are read in the main program (UD0200) and transferred to routines B2X, C2, D2, and F2 via a labeled COMMON statement.

SECTION IV

RESULTS

1. OVER-ALL PERFORMANCE

The mass-averaged performance of the rotor and of the complete compressor stage is tabulated in Table 4 and plotted in Figure 12. As shown on the compressor map, the performance of this machine in terms of flow, pressure ratio, and efficiency deteriorated rapidly with increasing speed. At 100 percent design corrected speed, corrected flow was approximately 30 percent low, rotor efficiency was 14 points low, stage efficiency was 21 points low, rotor total pressure ratio was 2.63 versus approximately 3.3, and stage total pressure ratio was 2.25 versus 3.0. The compressor was throttled to stall at each corrected speed shown on the map. The data point nearest stall in each case was taken at a throttle opening approximately 0.5 percent further open than the setting which precipitated stall. This change in throttle area is equivalent to about 0.9 percent of the annulus area at the rotor inlet.

2. BLADE-ELEMENT PERFORMANCE (ACROSS BLADE)

The radial distributions of relative inlet Mach number, incidence angle, loss coefficient, deviation angle, and diffusion factor for both rotor and stator are presented in Figures 13 through 82, using Tables 5-11, for each data point shown on the compressor map. One set of these five radial distributions is presented for each blade row at each corrected speed. In each of these sets, the distributions for all throttle settings are superimposed on each respective plot. As described earlier in Section III, this data was reduced using the full radial equilibrium equation with the equations of momentum, continuity, etc. satisfied at each computing station for each streamline. This data, also used for the compressor map, was reduced with computing stations only at blade-row edges and in free spaces; there were no computing stations internal to blade rows.

3. BLADE-ELEMENT PERFORMANCE (WITHIN BLADE)

The data point nearest maximum stage efficiency for each operating speed was selected for more detailed analysis. The more detailed analysis involved the introduction of four additional computing stations within the rotor. The data reduction was then accomplished in the same manner as before, with blockages and deviation angles internal to the rotor adjusted so that calculated and measured static pressures along the casing adjacent to the rotor tip were as nearly coincident as possible. The results of these analyses include plots of the

radial distribution of the same five parameters for rotor and stator described in the preceding paragraph (Figures 83 through 152), plots of the experimental and calculated axial distribution of static pressure at hub, mean, and case (Figures 153 through 159), and a complete aerodynamic description at each computing station - streamline intersection (Appendix A). Tables giving the stator suction- and pressure-surface static pressures for these test points have been included in Appendix B.

4. ROTOR TIP DYNAMIC PRESSURE MEASUREMENTS

The dynamic distribution of static pressure over the rotor tips was measured during operation. This data was primarily of interest for determining shock patterns in the rotor tip region. Signals obtained at low speeds were clean and consistent. However, at high speeds where measurements were recorded, it was found that extreme unsteadiness resulting from high rotor incidence angles made the data unuseable. Consequently, none of this data is presented. The principal value of these measurements proved to be a means of qualitatively assessing flow stability during the test.

SECTION V

CONCLUSIONS

The performance of this compressor stage was so far below its design point in all respects - flow, pressure ratio, and efficiency - that it seemed pointless to pursue the boundary-layer-control investigations originally planned at this time. No form of boundary layer control practical to install in a gas turbine engine was thought capable of producing a useful improvement on this stage. Such forms of control as massive suction were not considered to be of practical interest for this application.

Principal attention at this point was devoted to an attempt to understand why this stage performed as it did and in turn to determine what kind of configuration change might allow it to perform more closely to its design objectives. Low rotor total pressure ratio and low flow logically occur together in a stage of this general type because the stator operates choked over a significant portion of the speed range. In this instance, the stator first choked at about seventy percent corrected design speed. An examination of the radial distributions of rotor deviation angle from forty through seventy percent corrected speed shows that, except for a steep increase very close to the tip, the experimental distributions were relatively near the design distribution. The design distribution shown in Reference 1 is reproduced in Figure 160 in this report. However, between seventy and eighty-two percent corrected speed, deviation increased nearly fifty percent and remained high up to design speed. To see what relationship rotor deviation might have to rotor incidence, the mid-radius values of these parameters were cross plotted for the data sets presented in Appendix A. This cross plot is shown in Figure 161. The interesting result is that rotor deviation is seen to be a steep and linear function of incidence from forty to eighty-two percent corrected design speed. Deviation increases approximately three degrees for every degree increase in incidence angle. Deviation peaked at ninety percent speed and declined slightly at design speed. Whether this apparent peaking and decline is meaningful or is simply a result of the arbitrary mid-radius location selected to make this plot was not investigated.

The main conclusion drawn from the collective body of data is that the behavior of the rotor deviation angle as a function of incidence was such that, as the rotor was forced to operate at high incidence angles at part speed, the relative turning angle across the rotor was reduced too rapidly for the compressor to recover as design speed was approached. If the compressor were operated above design speed, the pressure ratio might increase sufficiently rapidly to allow rotor incidence to drop

significantly. However, the slope of peak rotor efficiency versus flow on the compressor map indicates that a relatively large overspeed might be required and increasing shock losses would probably make a significant reduction of incidence unrealizable. An increase in stator throat area would allow the rotor to operate more efficiently and at a higher pressure ratio. However, it appears unlikely that this alone would be sufficient to cause the rotor to operate reasonably near its design point, and part-speed performance might still pose a problem.

The solution to this problem appears to lie in achieving better control of rotor deviation angle. Better control, in this instance, means both a reduction in the absolute value of deviation angle at high back pressures and a reduction in the variation of deviation with incidence angle to improve part-speed operation. The obvious method of achieving both of these goals is an increase in rotor solidity. However, since the solidity of the tested rotor was already approximately 2.0, an increase in solidity sufficient to control the deviation angle would lead to higher diffusion losses, probably also to higher shock losses due to increased incidence resulting from higher blade blockage, and would naturally result in greater weight. So little camber exists in the front part of the blade between the leading edge and the shock impingement point that higher solidity in this region becomes a distinct disadvantage, particularly in view of the high local blade angle,which magnifies the blockage effect of additional blades. On the other hand, near the trailing edge of the blade, the radius of curvature of the camberline is approximately equal to the blade spacing and the local blade angle is much lower. Increased solidity in this region should greatly improve flow guidance and the blockage effect should be minor. These considerations led to a decision to incorporate partial blades or "splitter vanes" in the aft portion of the rotor such as shown in Figure 162. Details of this redesign and its performance will be published in future reports.

Because this compressor operated so far from its design point at design speed, no serious attempt was made to draw additional conclusions from the data. At the time of writing this report, the above described rotor modification had already been tested and was largely successful. The discussion of other performance factors will be expanded in the next test report.

TABLE I

INSTRUMENTATION LIST

ITEM NUMBER	TYPE SENSOR	LOCATION			REMARKS
		AXIAL	RADIAL	CIRCUMFERENTIAL	
057	T/C	6.181	7.800	4°28'	Was No. 095
058	T/C				Humidity
059	T/C				(Not In Use)
060	T/C			45°	Plenum
061	T/C			135°	Plenum
062	T/C			225°	Plenum
063	T/C			315°	Plenum
064	T/C	LE	8.371	Vane 22	Leading Edge
065	T/C	LE	8.371	Vane 42	Leading Edge
066	T/C	LE	8.251	Vane 24	Leading Edge
067	T/C	LE	8.251	Vane 44	Leading Edge
068	T/C	LE	8.121	Vane 22	Leading Edge
069	T/C	LE	8.121	Vane 42	Leading Edge
070	T/C	LE	8.001	Vane 24	Leading Edge
071	T/C	LE	8.001	Vane 44	Leading Edge
072	T/C	LE	7.871	Vane 22	Leading Edge
073	T/C	LE	7.871	Vane 42	Leading Edge
074	T/C	6.181	8.440	4°28'	Disch. Rake Element
075	T/C	6.181	8.440	36°48'	Disch. Rake Element
076	T/C	6.181	8.440	69° 7'	Disch. Rake Element
077	T/C	6.181	8.440	208°38'	Disch. Rake Element
078	T/C	6.181	8.440	243°58'	Disch. Rake Element
079	T/C	6.181	8.280	4°28'	Disch. Rake Element
080	T/C	6.181	8.280	36°48'	Disch. Rake Element
081	T/C	6.181	8.280	69° 7'	Disch. Rake Element
082	T/C	6.181	8.280	208°38'	Disch. Rake Element
083	T/C	6.181	8.280	243°58'	Disch. Rake Element
084	T/C	6.181	8.120	4°28'	Disch. Rake Element
085	T/C	6.181	8.120	36°48'	Disch. Rake Element
086	T/C	6.181	8.120	69° 7'	Disch. Rake Element
087	T/C	6.181	8.120	208°38'	Disch. Rake Element
088	T/C	6.181	8.120	243°58'	Disch. Rake Element
089	T/C	6.181	7.960	4°28'	Disch. Rake Element
090	T/C	6.181	7.960	36°43'	Disch. Rake Element
091	T/C	6.181	7.960	69° 7'	Disch. Rake Element
092	T/C	6.181	7.960	208°38'	Disch. Rake Element
093	T/C	6.181	7.960	243°58'	Disch. Rake Element
094	T/C	6.181	7.800	4°28'	Disch. Rake Element
095	T/C	6.181	7.800	36°48'	Disch. Rake Element
096	T/C	6.181	7.800	69° 7'	Disch. Rake Element
097	T/C	6.181	7.800	208°38'	Disch. Rake Element
098	T/C	6.181	7.800	243°58'	Disch. Rake Element

TABLE I (continued)

ITEM NUMBER	TYPE SENSOR	LOCATION AXIAL	RADIAL	CIRCUMFERENTIAL	REMARKS
101	Atmos				Barometric Pressure
103	PS				Venturi Throat
105	PS				Venturi Cavity
107	PT				Plenum
109	PS	-0.25	ID	315°	Casing(Same as 751)
111	PS	-0.25	OD	315°	Casing
113	PS	0.00	OD	306°	Casing
115	PS	0.25	OD	294°	Casing
117	PS	0.50	OD	180°	Casing
119	PS	0.75	OD	190°	Casing
121	PS	1.00	OD	310°	Casing
123	PS	1.25	OD	170°	Casing
125	PS	1.50	OD	290°	Casing
127	PS	1.75	OD	301°	Casing
129	PS	2.00	OD	160°	Casing
131	PS	3.227	8.163	Vane 16	Suction Side Vane
133	PS	3.393	8.175	Vane 16	Suction Side Vane
135	PS	3.361	8.184	Vane 16	Suction Side Vane
137	PS	3.837	8.190	Vane 16	Suction Side Vane
139	PS	4.115	8.191	Vane 16	Suction Side Vane
141	Ref.				Not Used
143	Ref.				Atmos.
145	Ref.				15 PSIG Reference
147	Ref.				30 PSIG Reference
201	Atmos				Barometric Pressure
203	PS				Same as 103
205	PS				Same as 105
207	PT				Same as 107 and 752
209	PS	4.281	8.192	Vane 16	Suction Side Vane
211	PS	4.559	8.194	Vane 16	Suction Side Vane
213	PS	-2.00	ID	45° & 135°	Two Manifolded Taps
215	PS	-2.00	ID	225° & 315°	Two Manifolded Taps
217	PS	-2.00	OD	45° & 135°	Two Manifolded Taps
219	PS	-2.00	OD	225° & 315°	Two Manifolded Taps
221	PS	2.25	OD	Vanes 18,22,	Four Manif. Taps
				40 & 44	
223	PS	2.25	ID	113.5°,156.5°	Four Manif. Taps
				290.5°&334.5°	
225	PS	6.181	OD	60°	Casing
227	PS	6.181	OD	120°	Casing
229	PS	6.181	OD	252°	Casing
231	PS	6.181	OD	300°	Casing
233	PS	6.181	ID	60°	Casing
235	PS	6.181	ID	120°	Casing
237	PS	6.181	ID	252°	Casing
239	PS	6.181	ID	300°	Casing

TABLE I (continued)

ITEM NUMBER	TYPE SENSOR	LOCATION AXIAL	RADIAL	CIRCUMFERENTIAL	REMARKS
241	Ref.				Not Used
243	Ref.				Atmos.
245	Ref.				15 PSIG Reference
247	Ref.				30 PSIG Reference
301					Not Used
303					Not Used
305	PS	3.393	8.175	Vane 17	Pres. Side of Vane
307	PS	3.837	8.189	Vane 17	Pres. Side of Vane
309	PS	4.281	8.191	Vane 17	Pres. Side of Vane
311	PT	LE	8.371	Vane 20	Leading Edge
313	PT	LE	8.371	Vane 40	Leading Edge
315	PT	LE	8.251	Vane 18	Leading Edge
317	PT	LE	8.251	Vane 47	Leading Edge
319	PT	LE	8.121	Vane 20	Leading Edge
321	PT	LE	8.121	Vane 40	Leading Edge
323	PT	LE	8.001	Vane 18	Leading Edge
325	PT	LE	8.001	Vane 47	Leading Edge
327	PT	LE	7.871	Vane 20	Leading Edge
329	PT	LE	7.871	Vane 40	Leading Edge
331	PT	6.181	7.800	20°47'	Disch. Rake Element
333	PT	6.181	7.800	52°57'	Disch. Rake Element
335	PT	6.181	7.800	195°29'	Disch. Rake Element
337	PT	6.181	7.800	227°49'	Disch. Rake Element
339	PT	6.181	7.800	260° 8'	Disch. Rake Element
341	Ref.				Not Used
343	Ref.				Atmos.
345	Ref.				15 PSIG Reference
347	Ref.				30 PSIG Reference
401	PT	6.181	7.960	20°47'	Disch. Rake Element
403	PT	6.181	7.760	52°57'	Disch. Rake Element
405	PT	6.181	7.960	195°29'	Disch. Rake Element
407	PT	6.181	7.960	227°49'	Disch. Rake Element
409	PT	6.181	7.960	260° 8'	Disch. Rake Element
411	PT	6.181	8.120	20°47'	Disch. Rake Element
413	PT	6.181	8.120	52°71'	Disch. Rake Element
415	PT	6.181	8.120	195°29'	Disch. Rake Element
417	PT	6.181	8.120	227°49'	Disch. Rake Element
419	PT	6.181	8.120	260° 8'	Disch. Rake Element
421	PT	6.181	8.280	20°47'	Disch. Rake Element
423	PT	6.181	8.280	52°57'	Disch. Rake Element
425	PT	6.181	8.280	195°29'	Disch. Rake Element
427	PT	6.181	8.280	227°49'	Disch. Rake Element
429	PT	6.181	8.280	260° 8'	Disch. Rake Element
431	PT	6.181	8.440	20°47'	Disch. Rake Element
433	PT	6.181	8.440	52°57'	Disch. Rake Element

TABLE I (concluded)

ITEM NUMBER	TYPE SENSOR	LOCATION AXIAL	RADIAL	CIRCUMFERENTIAL	REMARKS
435	PT	6.181	8.440	195°29'	Disch. Rake Element
437	PT	6.181	8.440	227°49'	Disch. Rake Element
439	PT	6.181	8.440	260° 8'	Disch. Rake Element
441	Ref.				Not Used
443	Ref.				Atmos.
445	Ref.				15 PSIG Reference
447	Ref.				30 PSIG Reference
700	XPT	-0.25	OD	67°16'	Flush MTD. Kistler
701	XPT	0.00	OD	75°28'	Flush MTD. Kistler
702	XPT	0.25	OD	60°	Flush MTD. Kistler
703	XPT	0.50	OD	68°49'	Flush MTD. Kistler
704	XPT	0.75	OD	53°51'	Flush MTD. Kistler
705	XPT	1.00	OD	63°16'	Flush MTD. Kistler
706	XPT	1.25	OD	49° 8'	Flush MTD. Kistler
707	XPT	1.50	OD	59°23'	Flush MTD. Kistler
708					
709					
710	Prox.	1.25	OD	39°	Bentley Transducer

TABLE II

CALIBRATION OF SAMPLE THERMOCOUPLES

BATH °C[A]	SET PT °F[B]	AVG. OF 9 SAMPLES °F	MAX. SPREAD ± °F
65	148.1	148.4	0.1
100	211.4	210.9	0.1
150	300.8	301.4	0.4
175	346.5	346.4	0.5

A Oil Bath Set Pt.
B Mueller bridge readout converted to temperature.

TABLE III

CALIBRATION OF TEMPERATURE READOUT ELECTRONICS

SET PT. Avg+ °F	PRINTER OUTPUT Avg* °F	MAX. SPREAD ± °F
148.2	148.3	0.2
210.7	210.7	0.2
301.7	301.7	0.3
345.4	345.5	0.4

+ Average of two calibrated T/C's.
* Average of eight channels.

TABLE IV

MASS-AVERAGED COMPRESSOR PERFORMANCE

TEST I.D.	SPEED	ROTOR PR	ROTOR η	STAGE PR	STAGE η	MASS FLOW
208180106840	40%	1.209	.99	1.161	.772	11.54
0315240		1.23	.927	1.215	.871	9.63
0415840		1.23	.901	1.215	.844	8.91
0514040	*	1.224	.957	1.204	.879	10.34
0612740		1.218	.966	1.192	.859	10.88
0711240		1.214	.981	1.179	.829	11.21
0806840		1.21	.988	1.16	.768	11.59
0901340		1.208	.989	1.151	.729	11.60
208220215850	50%	1.377	.899	1.35	.841	11.48
0315550		1.376	.915	1.35	.857	11.93
0415050	*	1.368	.925	1.341	.866	12.48
0514450		1.366	.944	1.331	.861	12.86
0613650		1.363	.958	1.31	.83	13.38
0712550		1.361	.966	1.292	.80	13.49
0810950		1.362	.968	1.266	.732	13.63
0907550		1.36	.969	1.237	.661	13.66
1215860	60%	1.58	.903	1.529	.834	14.15
1315560		1.577	.913	1.525	.841	14.67
1315260	*	1.573	.92	1.515	.840	14.88
1514860		1.57	.924	1.498	.823	15.26
1614460		1.573	.93	1.475	.791	15.25
1713660		1.57	.927	1.438	.737	15.23
1812760		1.57	.927	1.414	.701	15.19
1911060		1.57	.925	1.38	.648	15.23
208240215670	70%*	1.828	.889	1.724	.795	16.92
0315570		1.827	.889	1.717	.79	16.90
0415370		1.83	.893	1.697	.773	16.91
0515070		1.829	.897	1.668	.750	17.08
0614270		1.828	.892	1.616	.698	16.99
1115882	82%*	2.057	.810	1.883	.702	18.12
1215782		2.065	.815	1.876	.698	18.18
1315682		2.07	.814	1.868	.688	18.21
1415582		2.076	.818	1.861	.684	18.20
1515382		2.079	.819	1.838	.67	18.31
208300215890	90%	2.262	.764	2.035	.655	19.04
0315990	*	2.28	.773	2.049	.662	19.25
0415890		2.292	.778	2.041	.658	19.33
0515690		2.296	.779	2.013	.643	19.60
0615090		2.299	.784	1.944	.611	19.56
0915800	100%*	2.594	.733	2.247	.609	20.76
1015700		2.616	.741	2.24	.607	21.10
1115500		2.624	.743	2.226	.601	21.15
1215100		2.635	.746	2.173	.581	21.21

* To be further considered in within-blade data reduction.

TABLE V

IDENTIFICATION OF SYMBOLS
FOR 40%-SPEED ACROSS-BLADE FIGURES

TEST IDENTIFICATION	SYMBOL
208180901340	
208180806840	
208180711240	
208180612740	
208180514040	
208180415840	
208180315240	
208180106840	

TABLE VI

IDENTIFICATION OF SYMBOLS
FOR 50%-SPEED ACROSS-BLADE FIGURES

TEST IDENTIFICATION	SYMBOL
208220907550	
208220810950	
208220712550	
208220613650	
208220514450	
208220415050	
208220315550	
208220215850	

TABLE VII

IDENTIFICATION OF SYMBOLS
FOR 60%-SPEED ACROSS-BLADE FIGURES

TEST IDENTIFICATION	SYMBOL
208221911060	
208221812760	
208221713660	
208221614460	
208221514860	
208221315260	
208221315560	
208221215860	

Table VIII

IDENTIFICATION OF SYMBOLS
FOR 70%-SPEED ACROSS-BLADE FIGURES

TEST IDENTIFICATION	SYMBOL
208240614270	◇
208240515070	×
208240415370	+
208240315570	△
208240215670	○

TABLE IX

IDENTIFICATION OF SYMBOLS
FOR 82%-SPEED ACROSS-BLADE FIGURES

TEST IDENTIFICATION	SYMBOL
208241515382	◇
208241415582	×
208241315682	+
208241215782	△
208241115882	○

TABLE X

IDENTIFICATION OF SYMBOLS
FOR 90%-SPEED ACROSS-BLADE FIGURES

TEST IDENTIFICATION	SYMBOL
208300615090	◇
208300515690	×
208300415890	+
208300315990	△
208300215890	○

TABLE XI

IDENTIFICATION OF SYMBOLS
FOR 100%-SPEED ACROSS-BLADE FIGURES

TEST IDENTIFICATION	SYMBOL
208301215100	×
208301115500	+
208301015700	△
208300915800	⦶

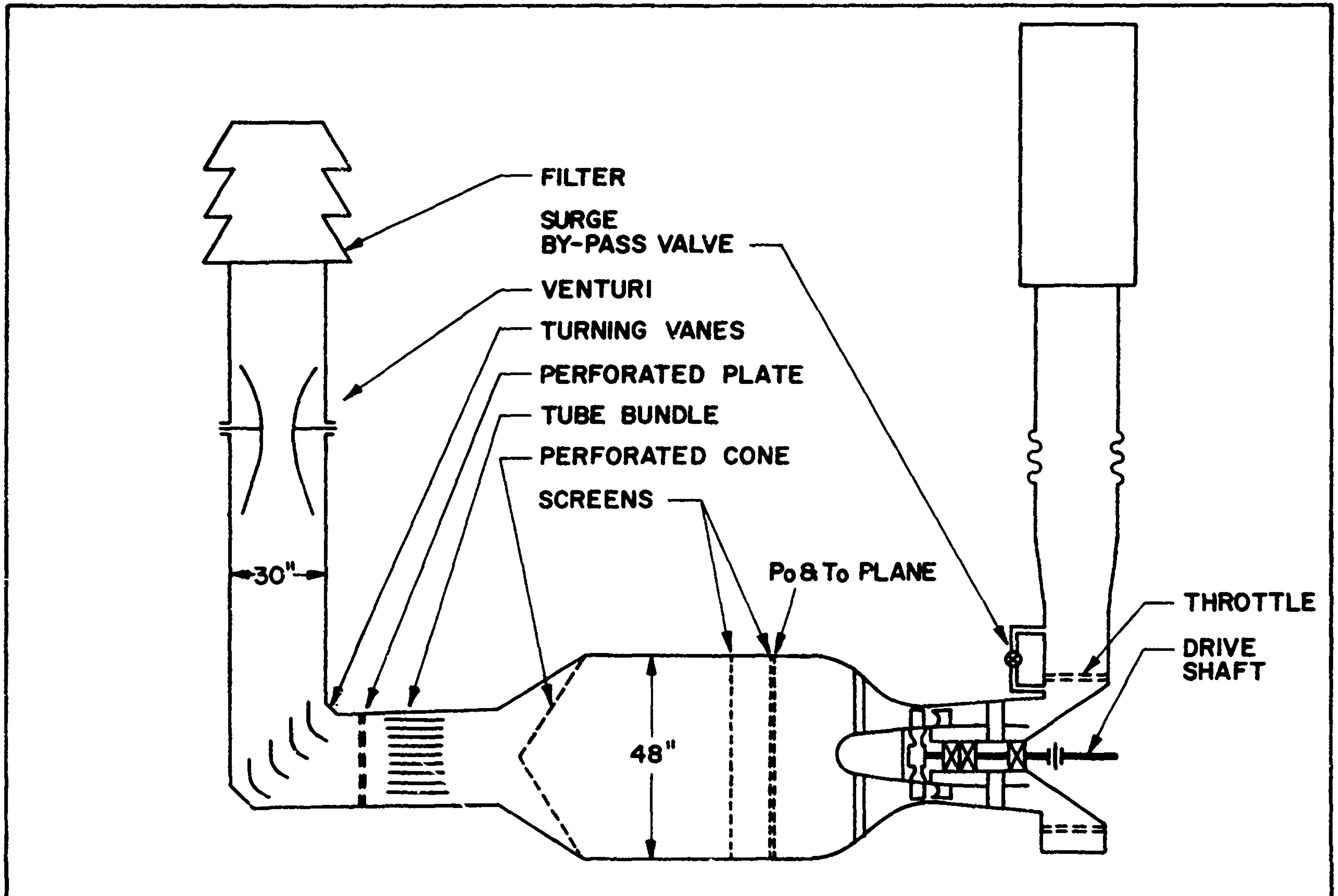


Fig. 1. Compressor Facility Flow Path

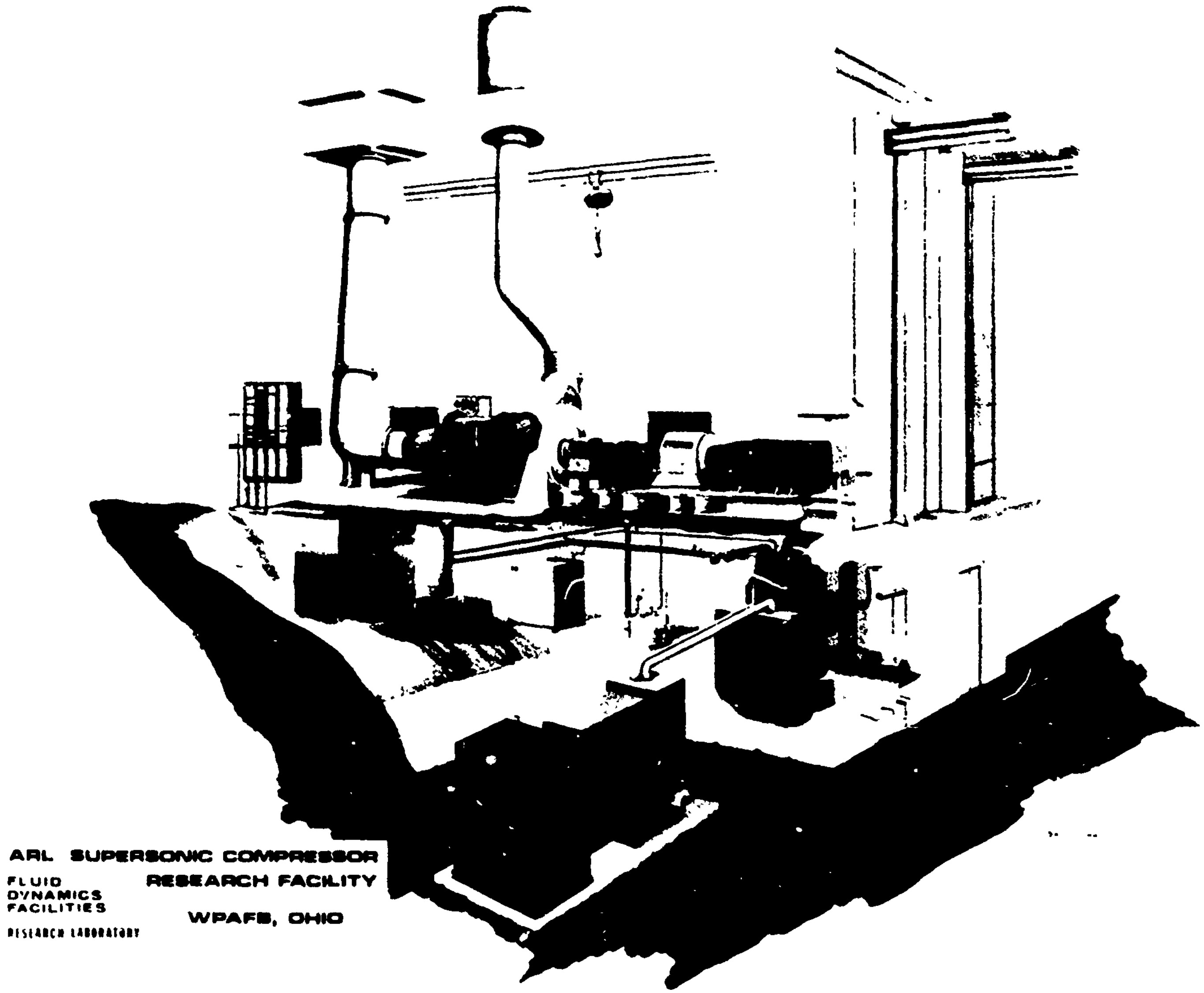
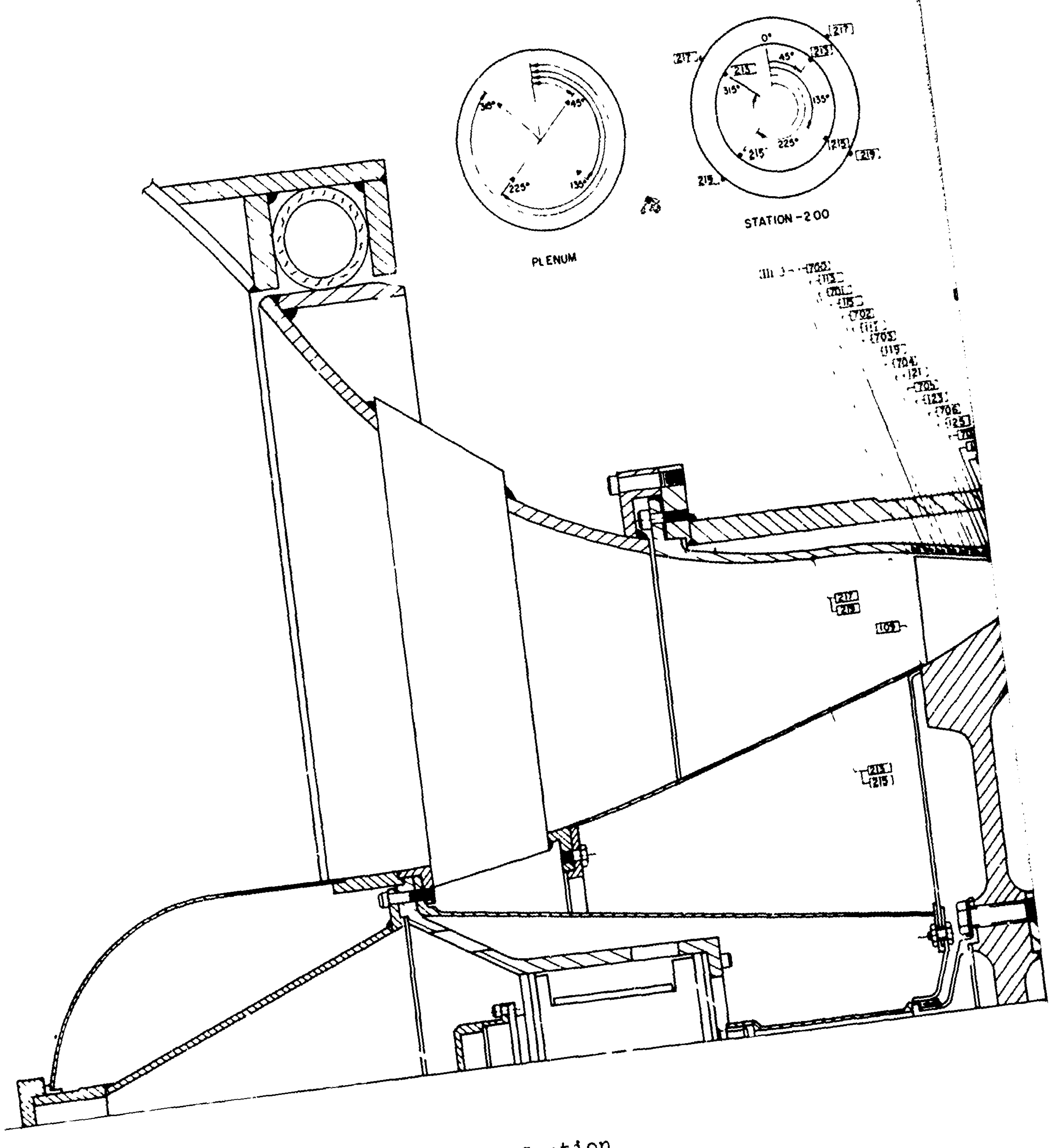
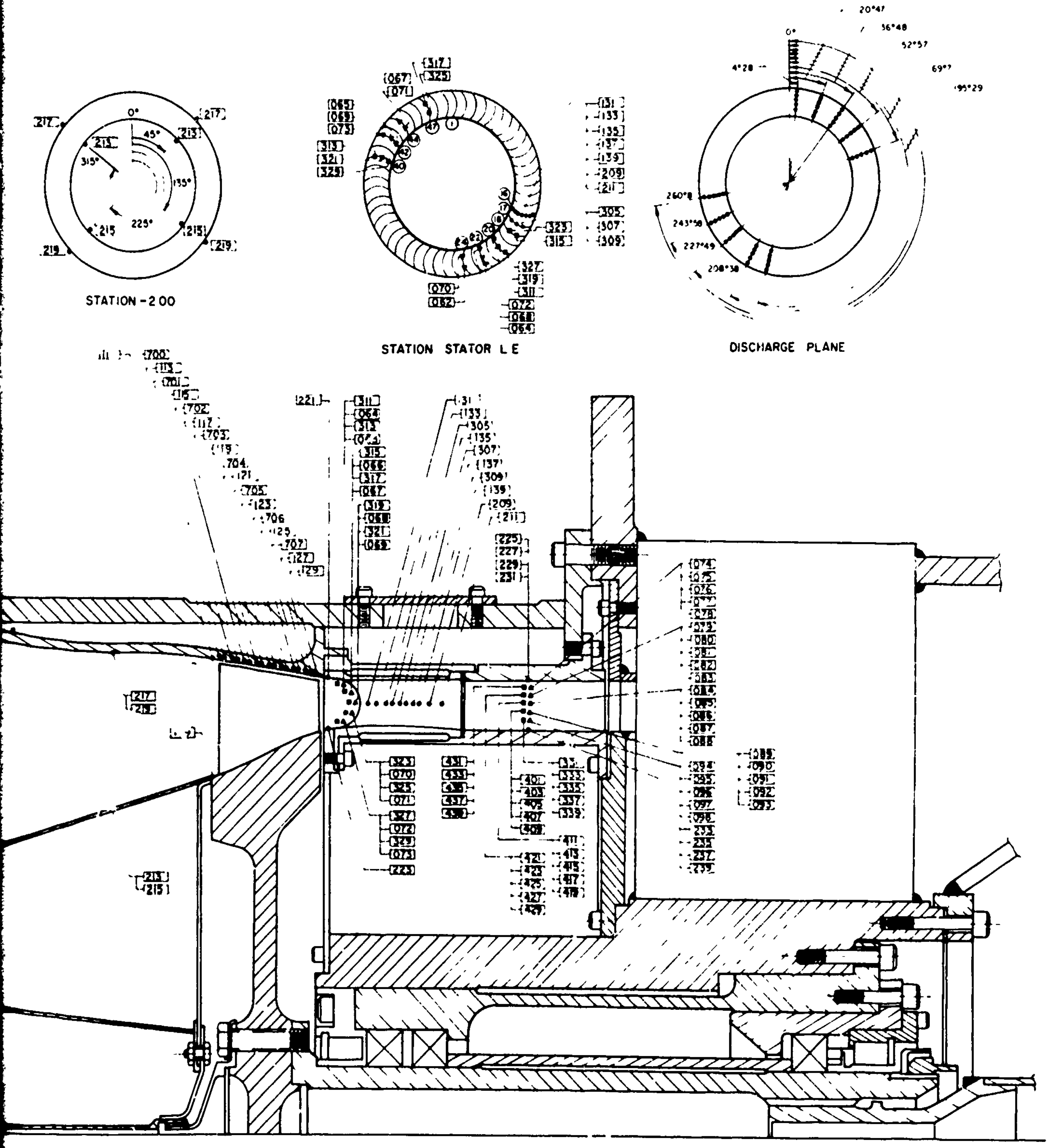


Fig. 2. Test Facility



A

Fig. 3. Compressor Cross Section with Instrumentation Locations



8

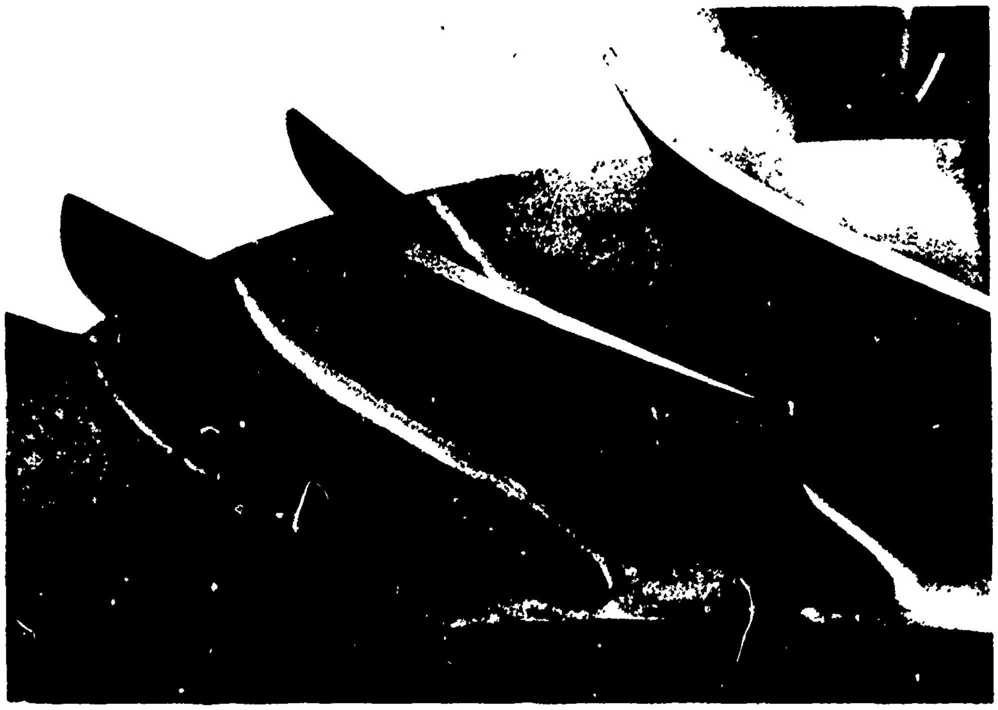


Fig. 4. Rotor Blades on Wheel

Fig. 5. Stator Blades

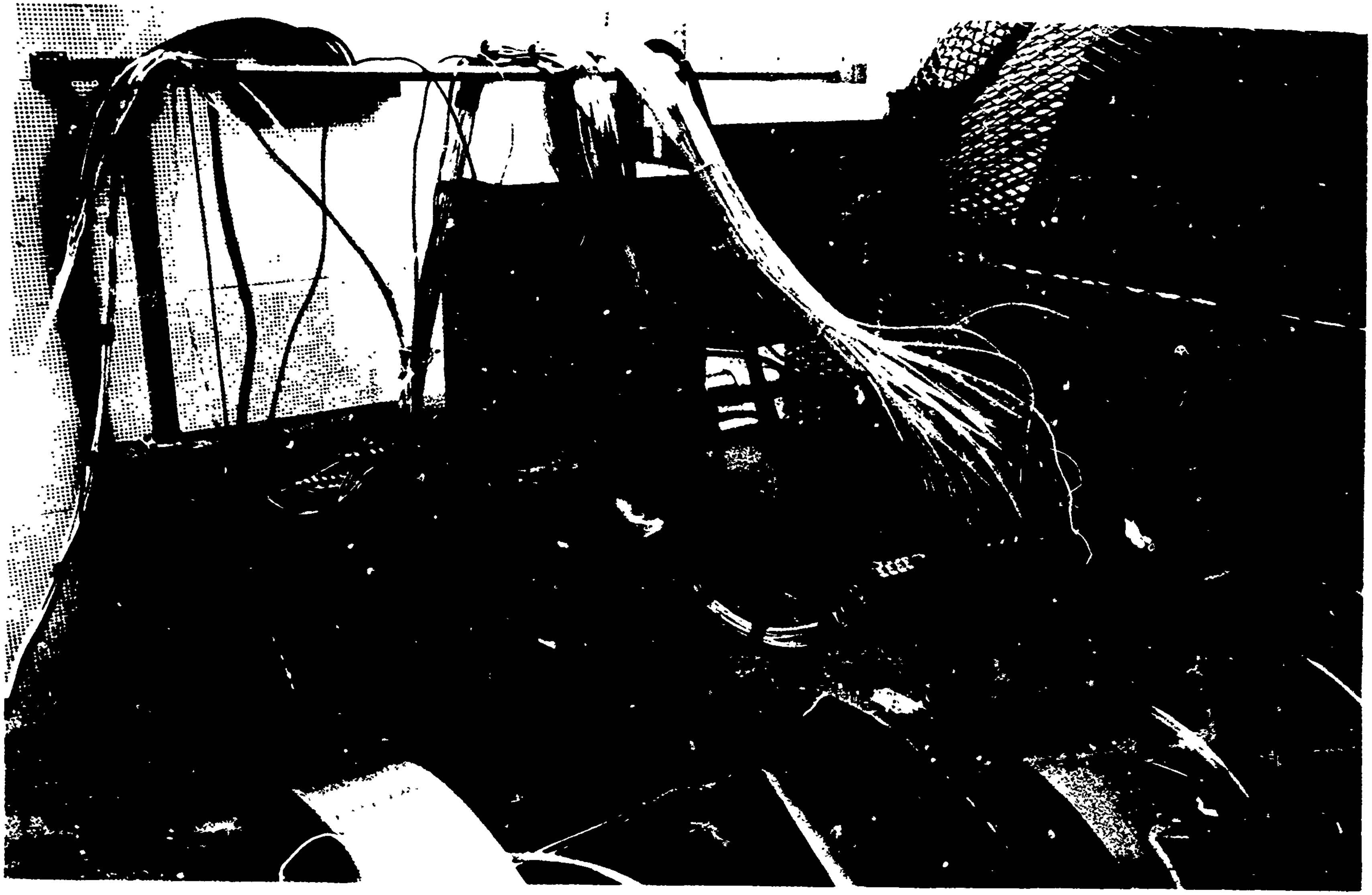


Fig. 6. Vehicle Instrumentation Bulkhead

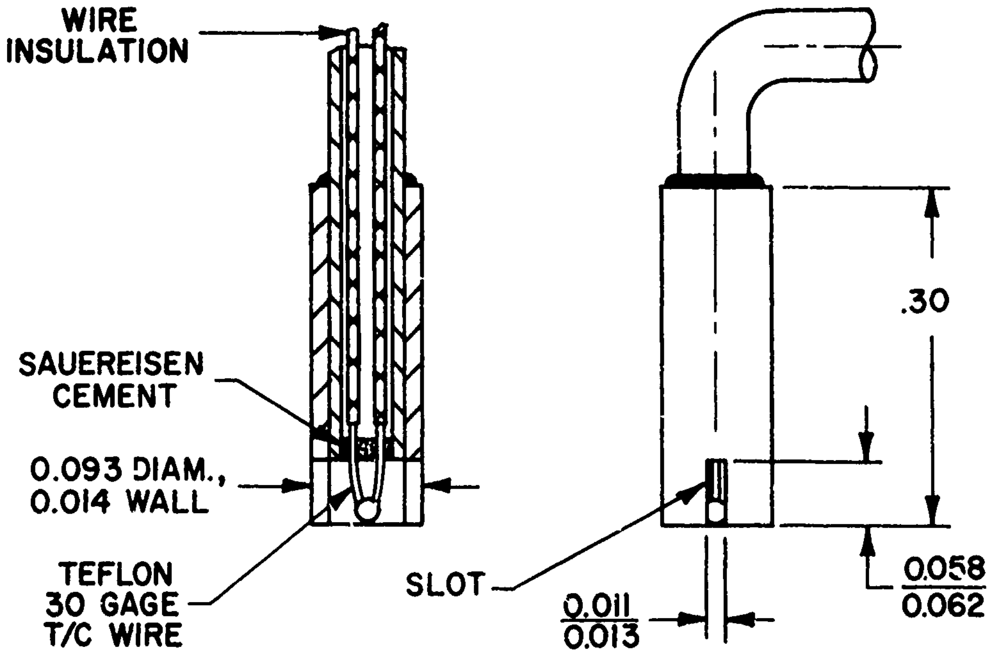


Fig. 7. Slot Vented Temperature Probe Design

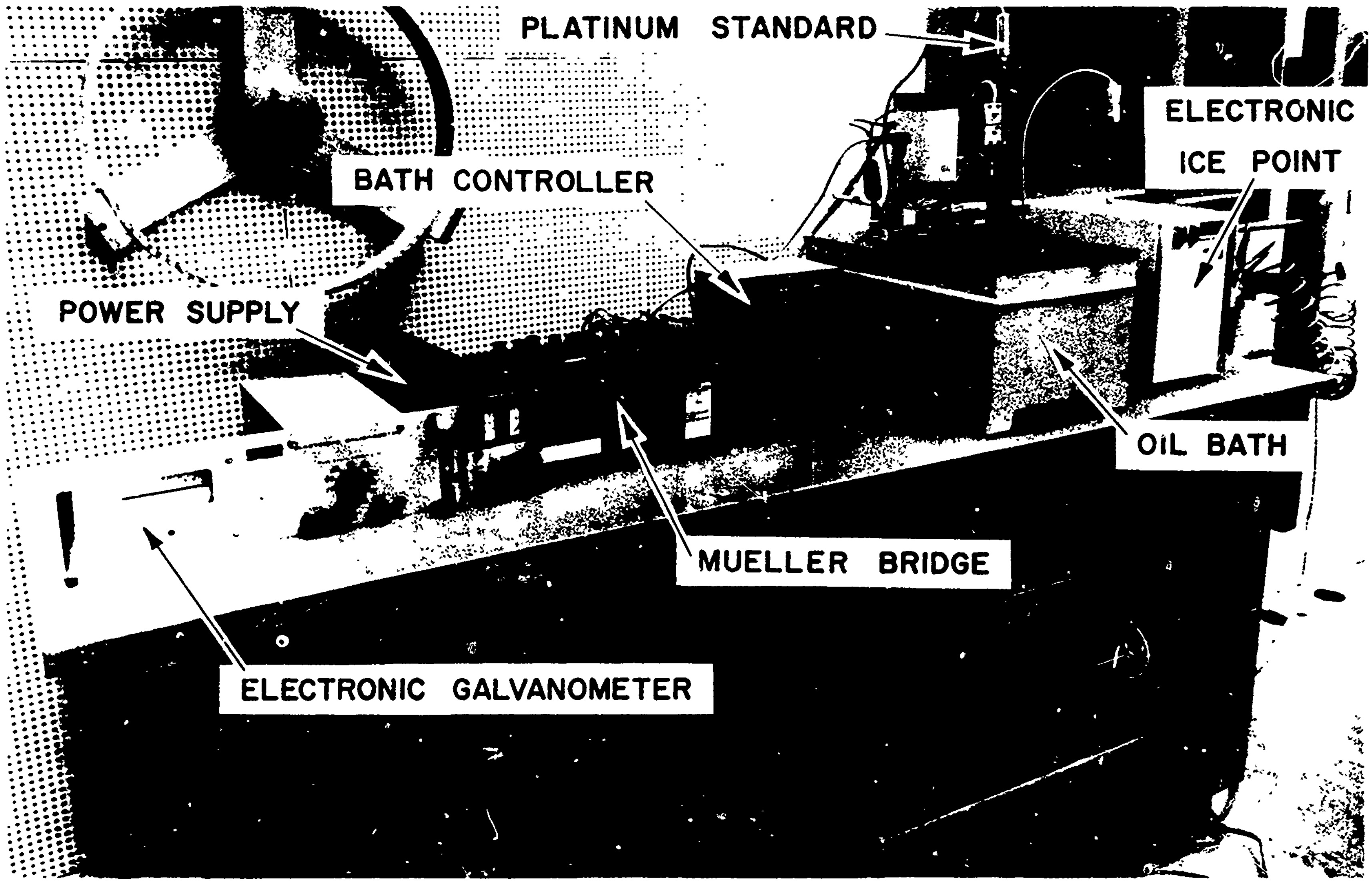


Fig. 8. Temperature Calibration Setup

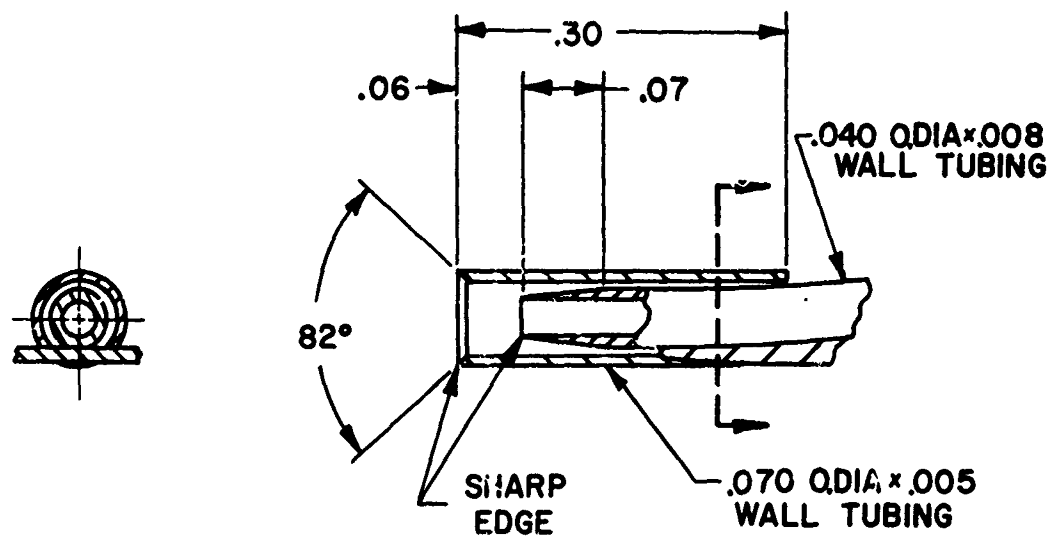
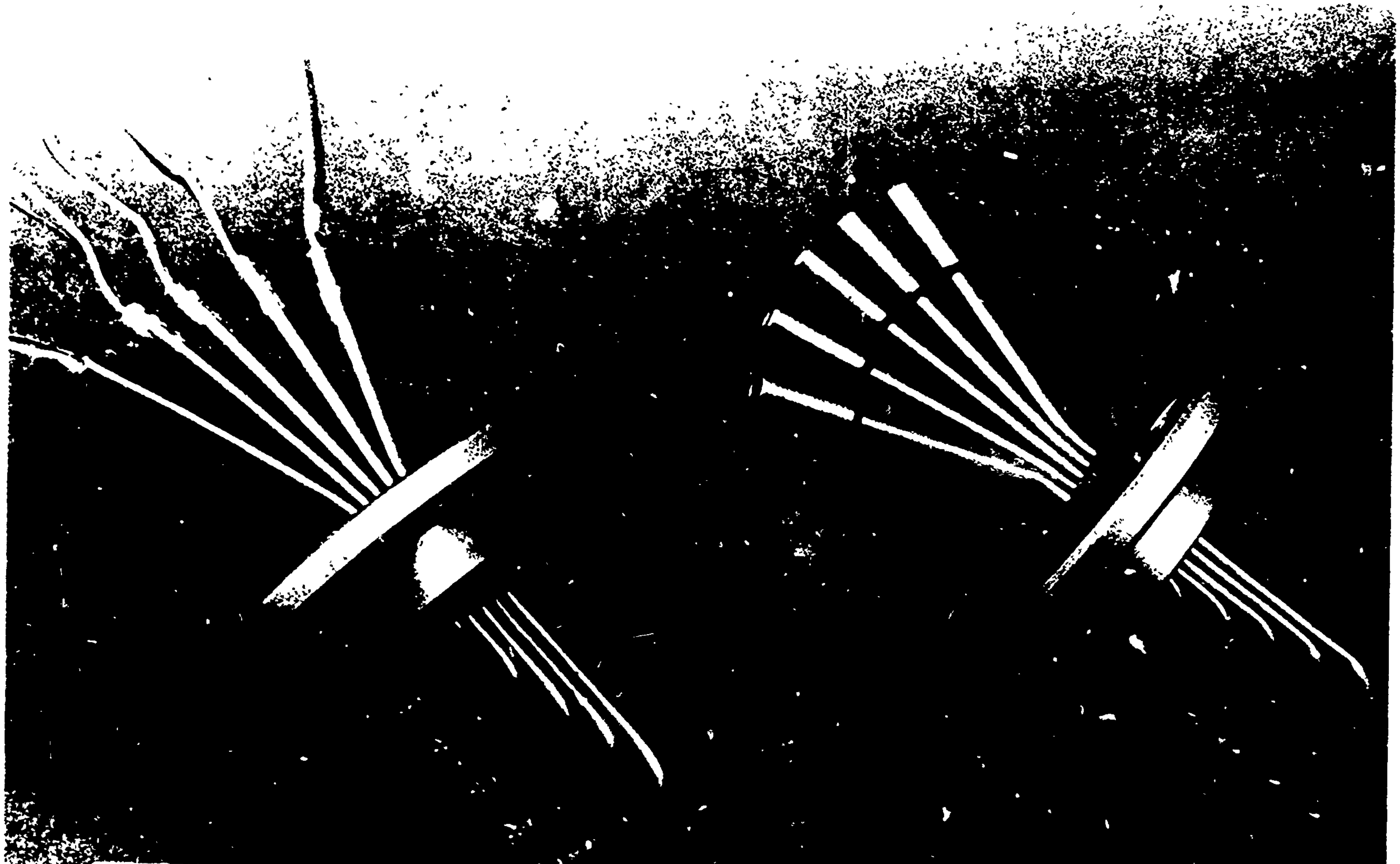


Fig. 9. Kiel Stagnation Tube Design



(a) Total Temperature (b) Total Pressure

Fig. 10. Instrumentation Rakes

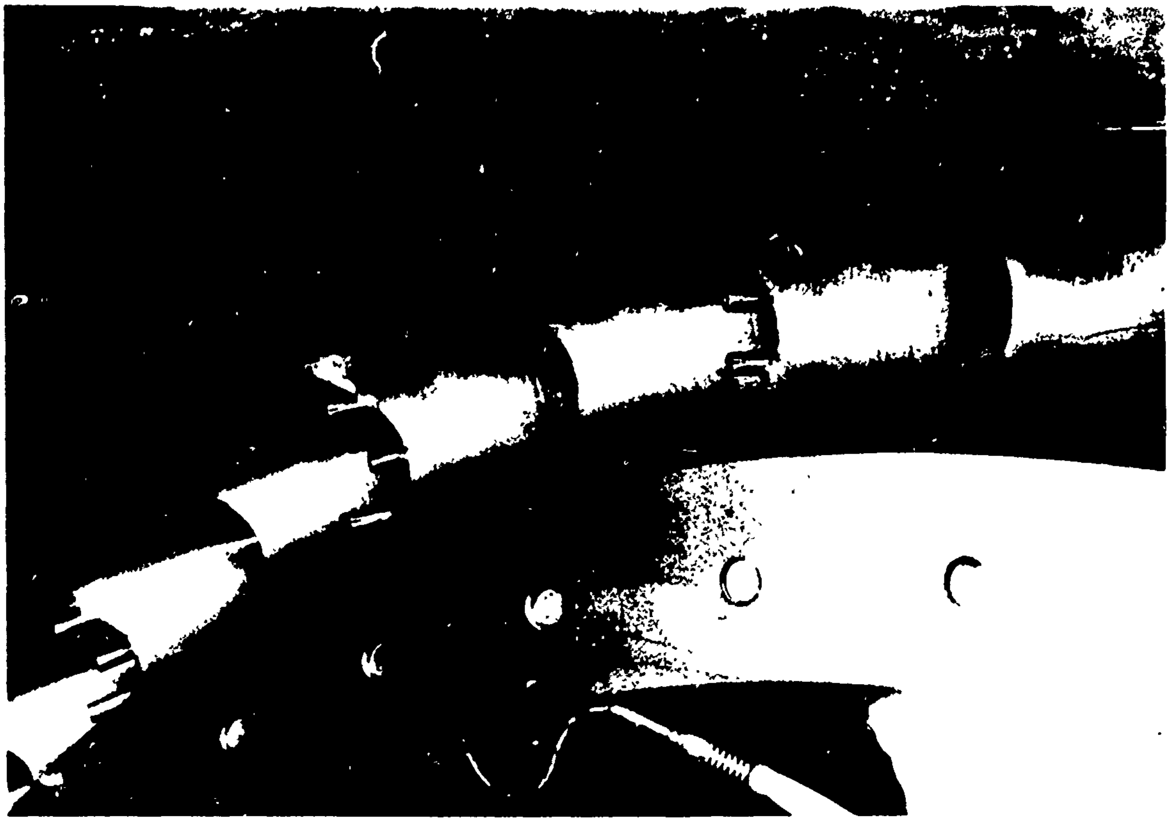


Fig. 11. Vane-Mounted Instrumentation

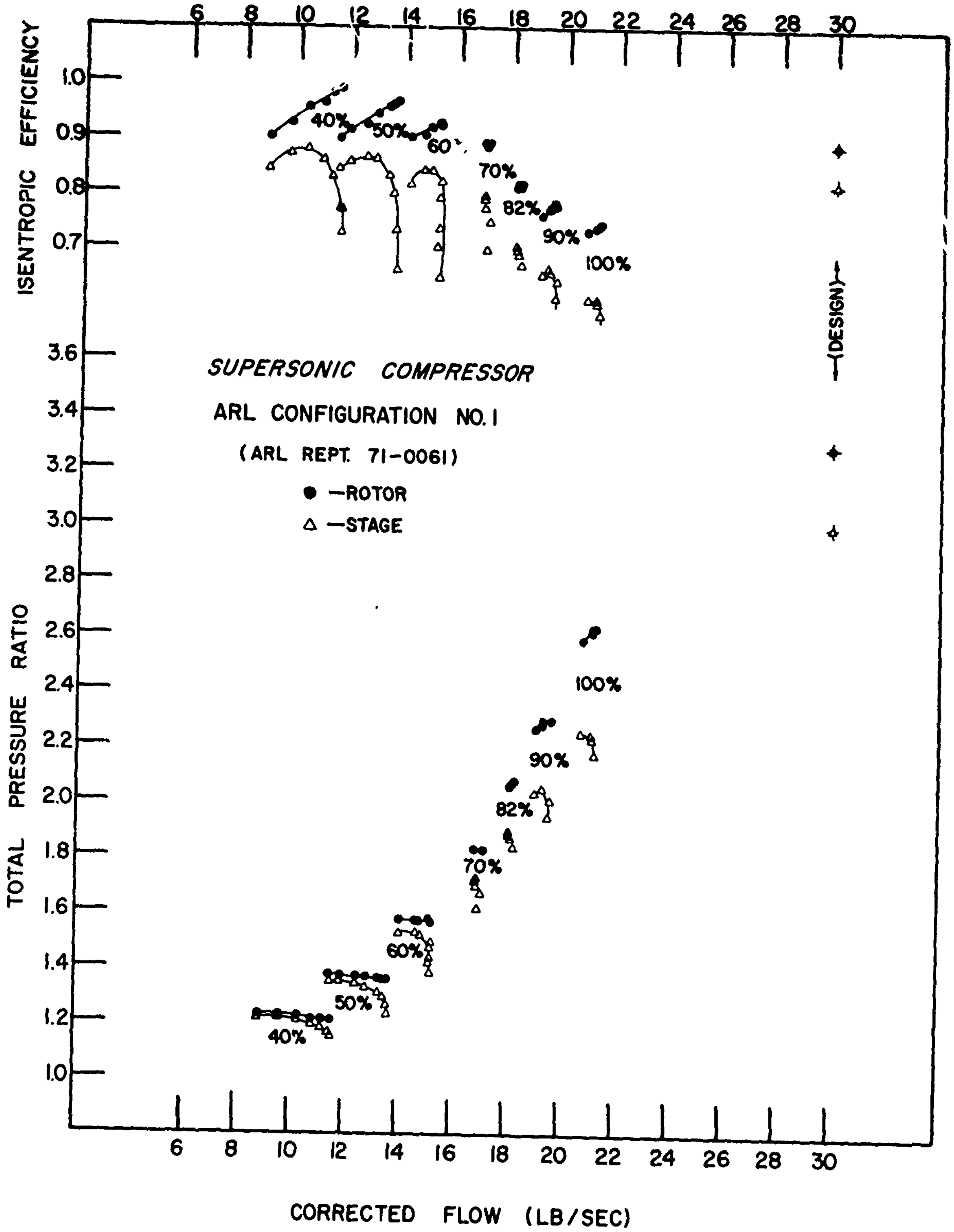


Fig. 12. Compressor Performance Map

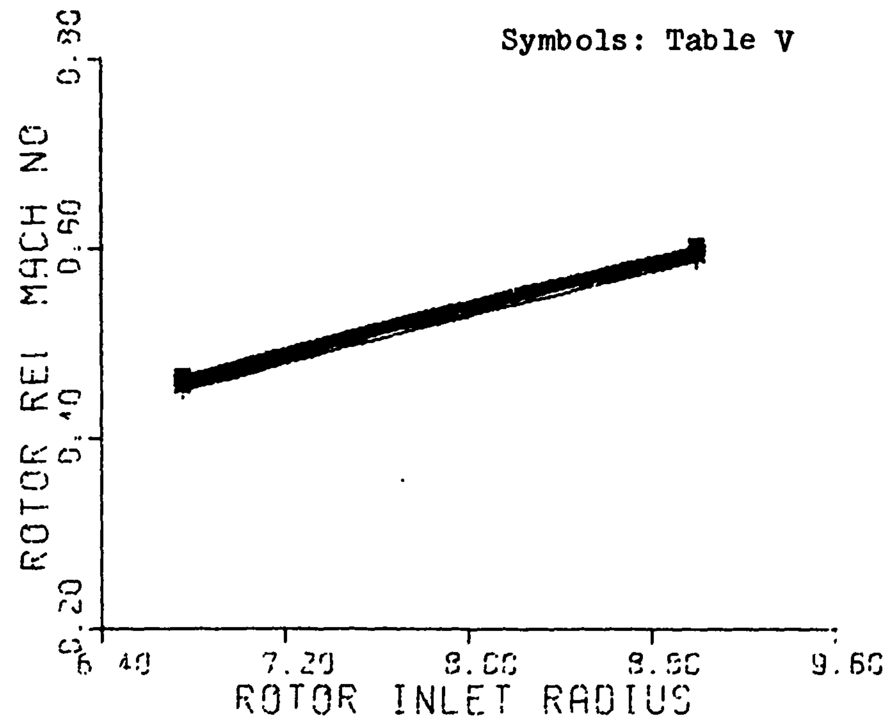


Fig. 13. Rotor Relative Mach Number vs Inlet Radius (40% Speed)

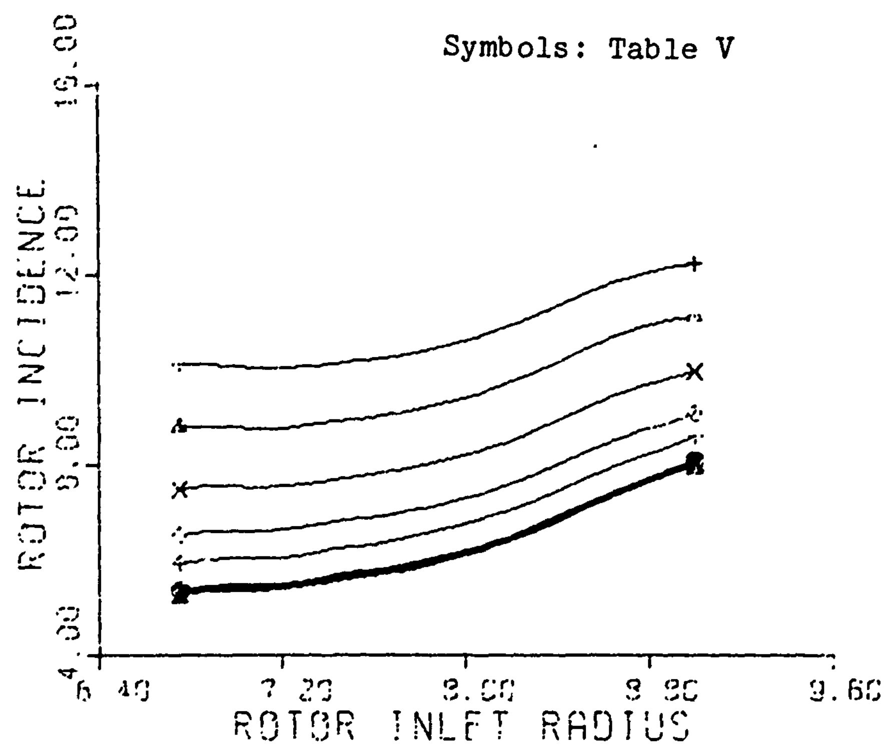


Fig. 14. Rotor Incidence vs Inlet Radius (40% Speed)

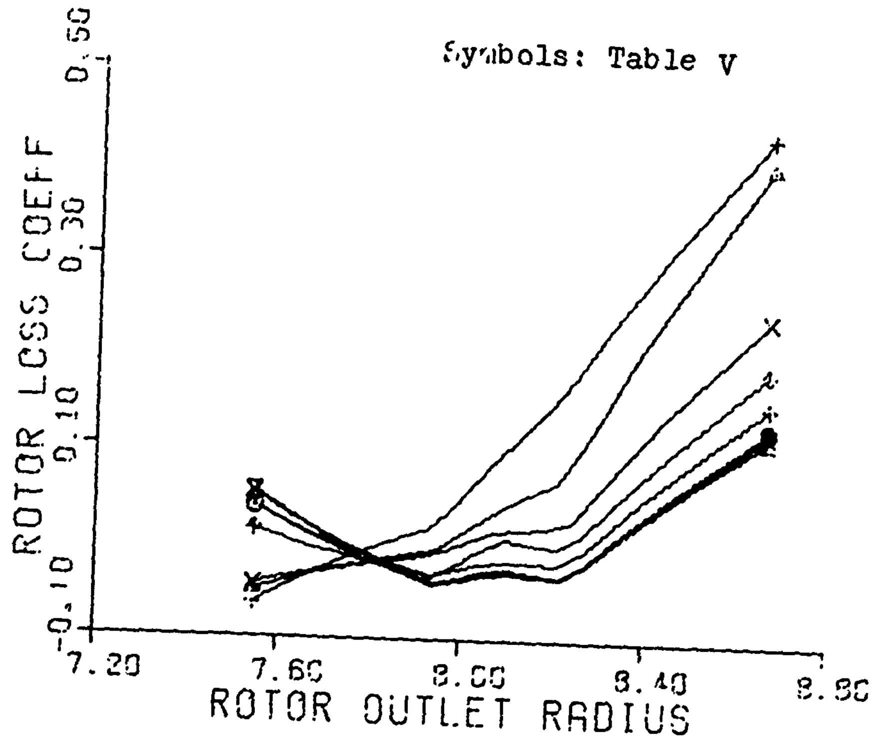


Fig. 15. Rotor Loss Coefficient vs Outlet Radius (40% Speed)

Symbols: Table V

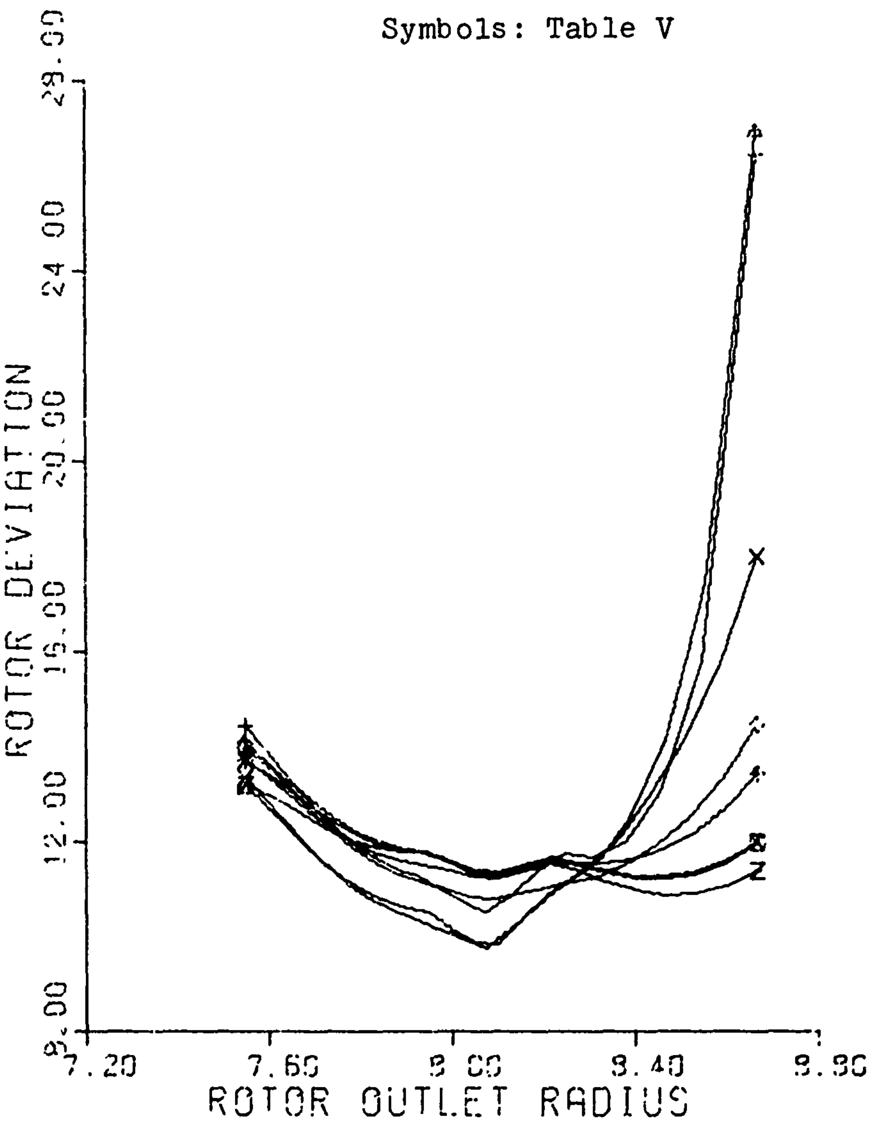


Fig. 16. Rotor Deviation vs Outlet Radius
(40% Speed)

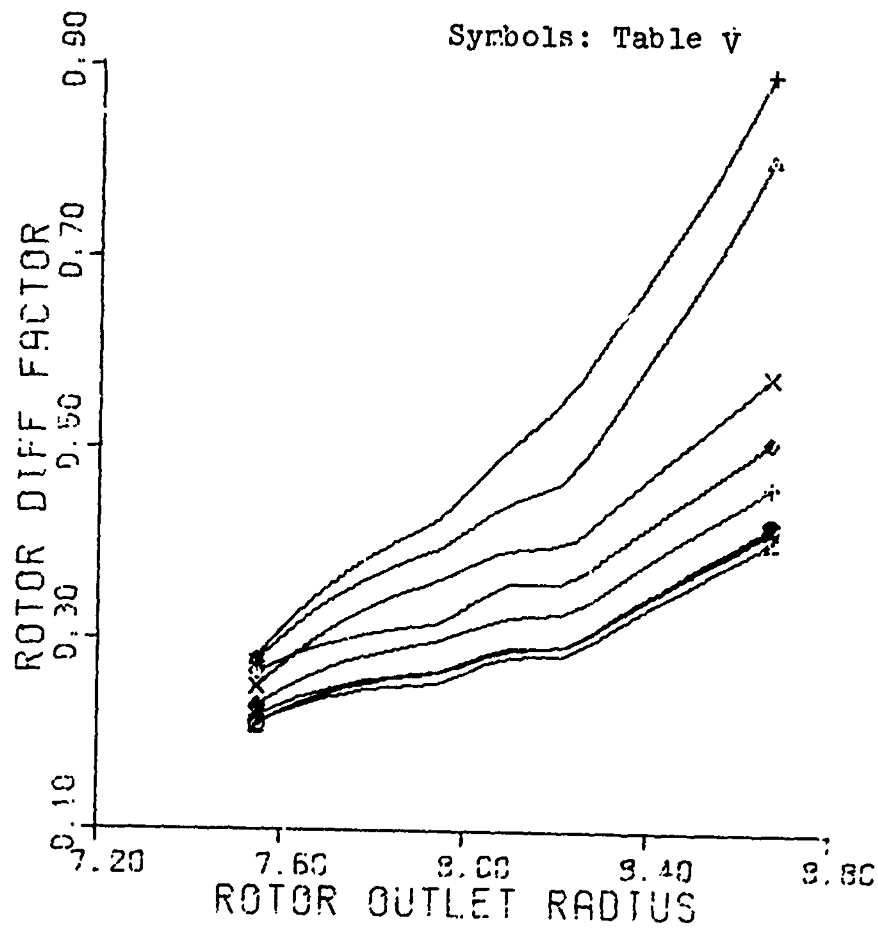


Fig. 17. Rotor Diffusion Factor vs Outlet Radius (40% Speed)

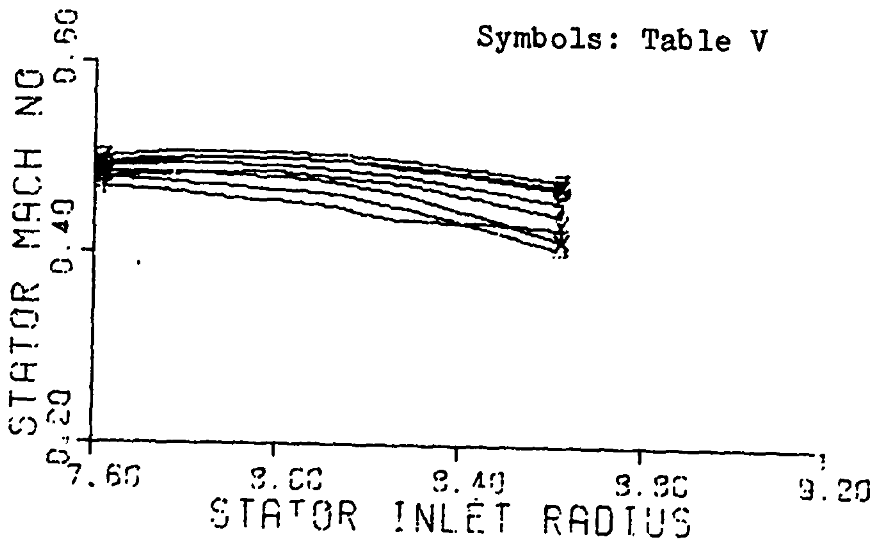


Fig. 18. Stator Mach Number vs Inlet Radius (40% Speed)

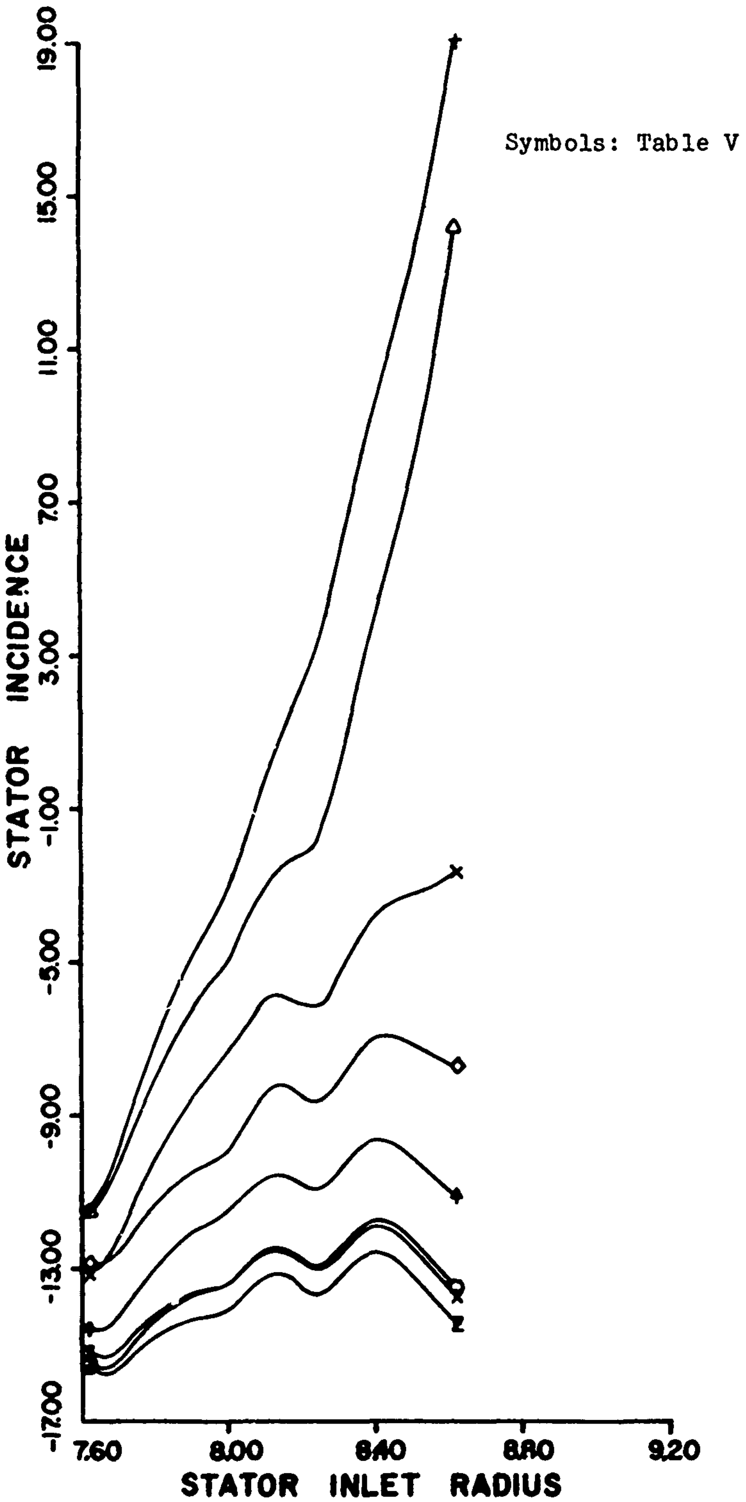


Fig. 19. Stator Incidence vs Inlet Radius
(40% Speed)

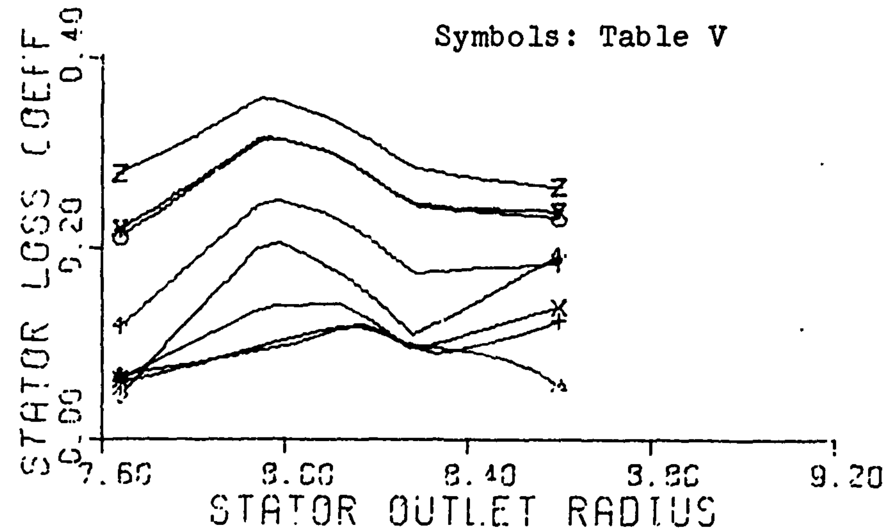


Fig. 20. Stator Loss Coefficient vs Outlet Radius (40% Speed)

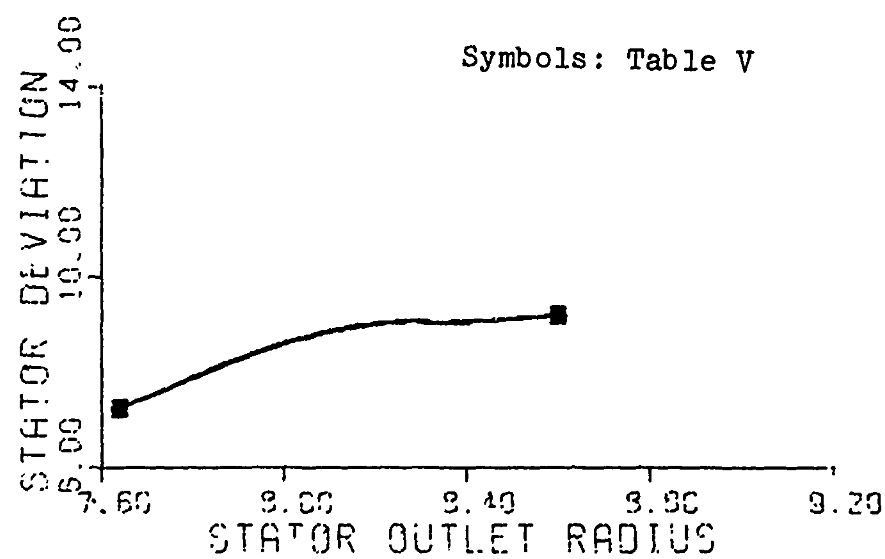


Fig. 21. Stator Deviation vs Outlet Radius (40% Speed)

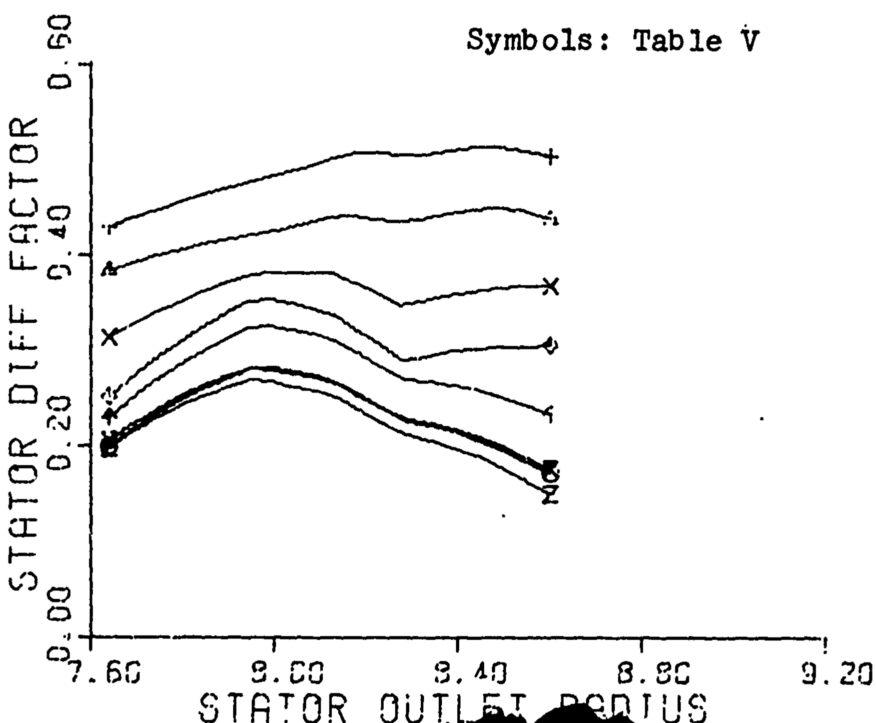


Fig. 22. Stator Diffusion Factor vs Outlet Radius
(40% Speed)

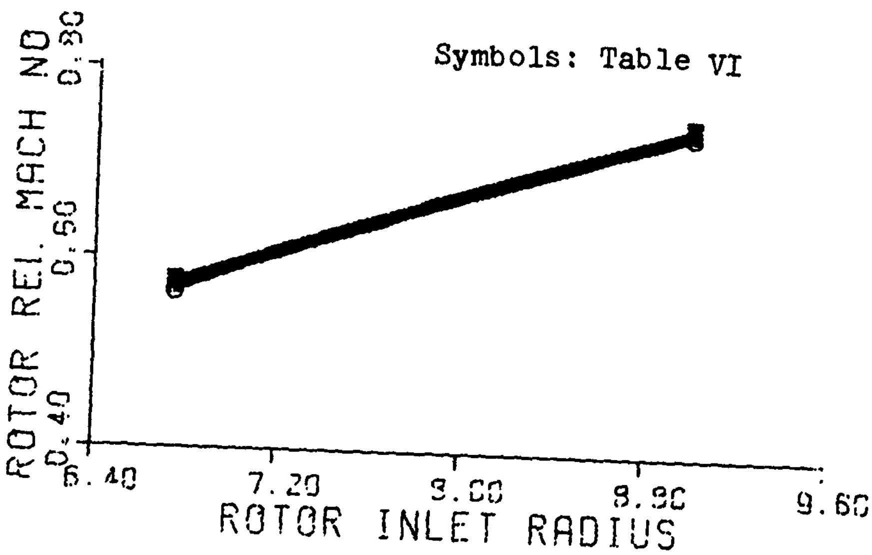


Fig. 23. Rotor Relative Mach Number vs Inlet Radius (50% Speed)

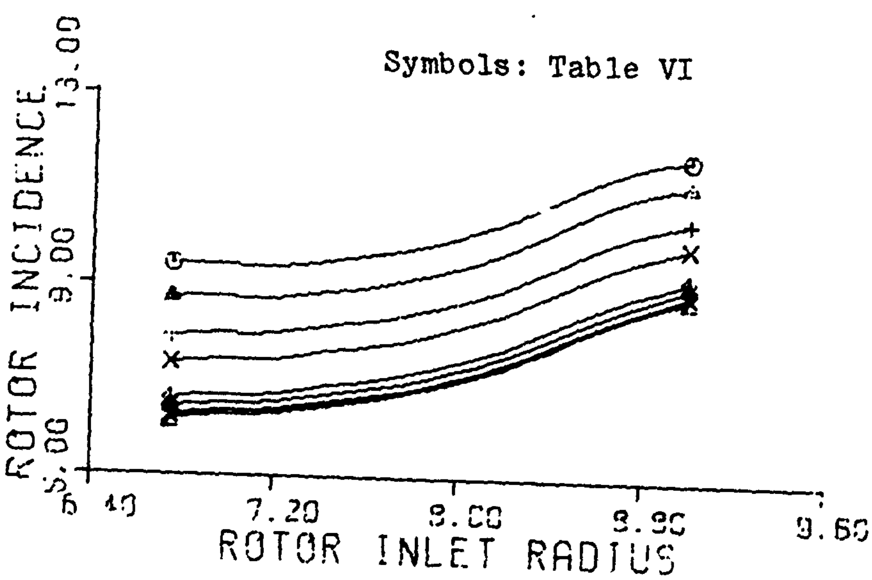


Fig. 24. Rotor Incidence vs Inlet Radius (50% Speed)

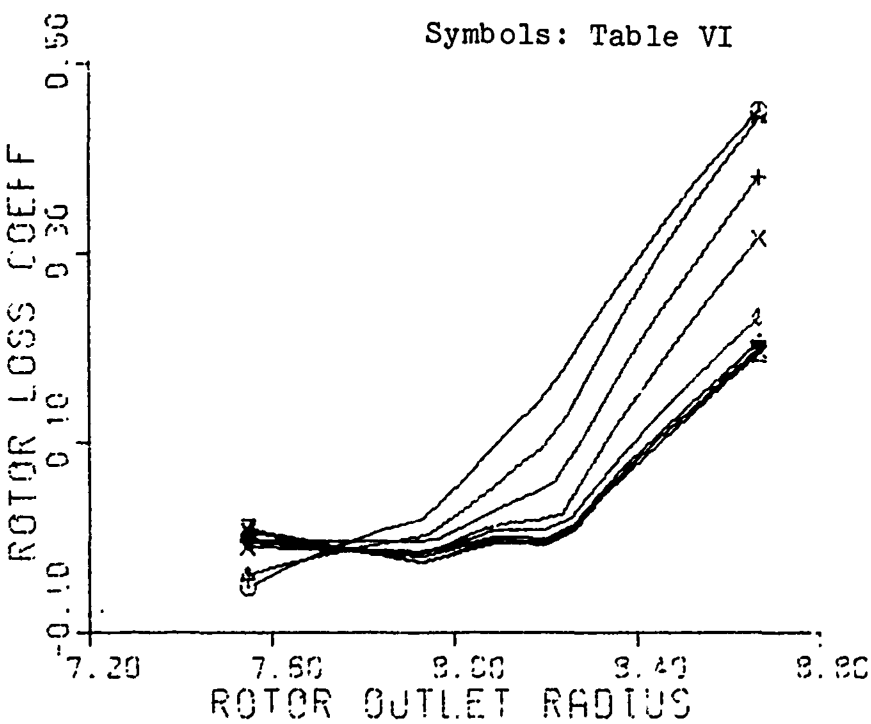


Fig. 25. Rotor Loss Coefficient vs Outlet Radius
(50% Speed)

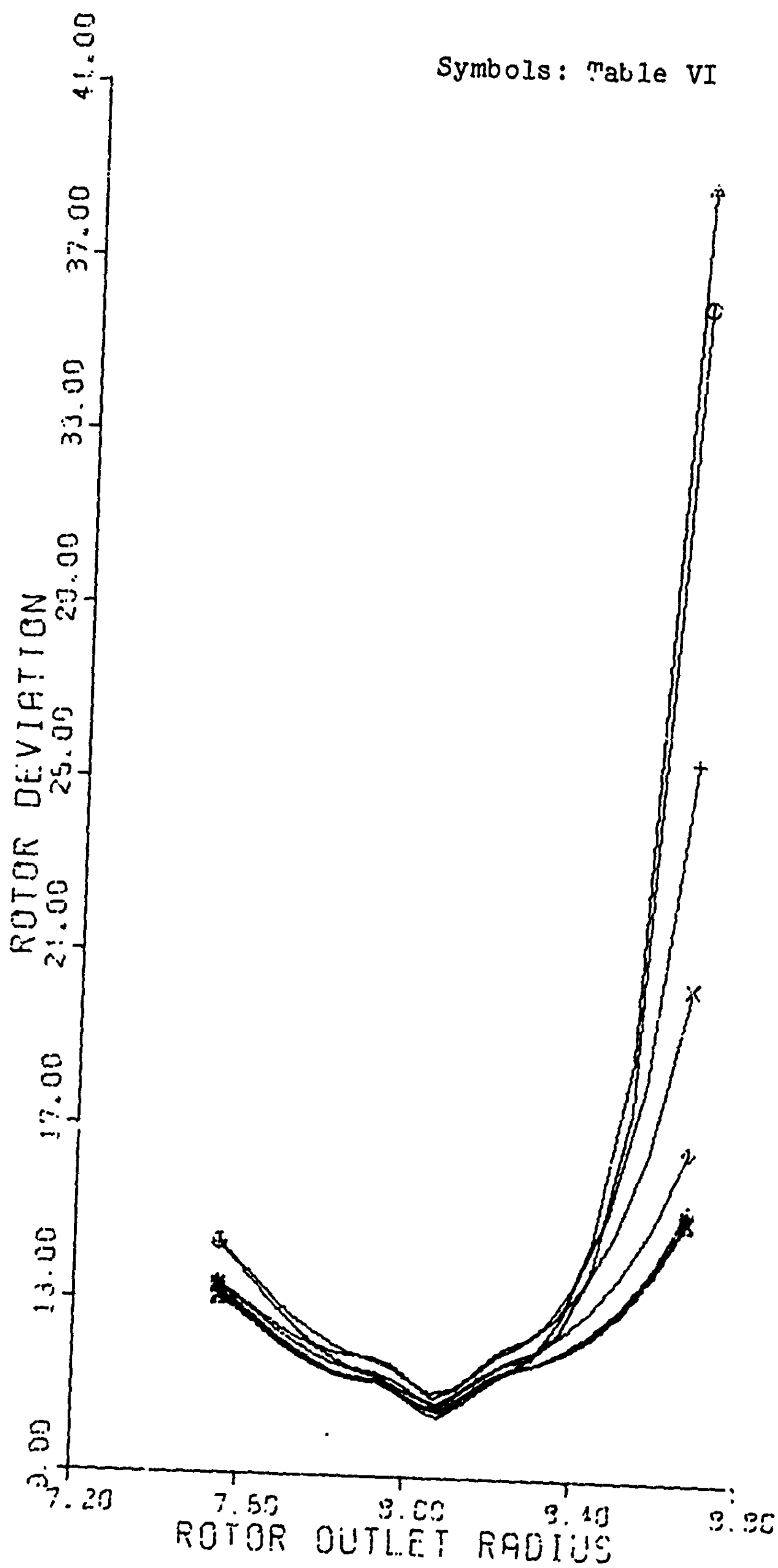


Fig. 26. Rotor Deviation vs Outlet Radius (50% Speed)

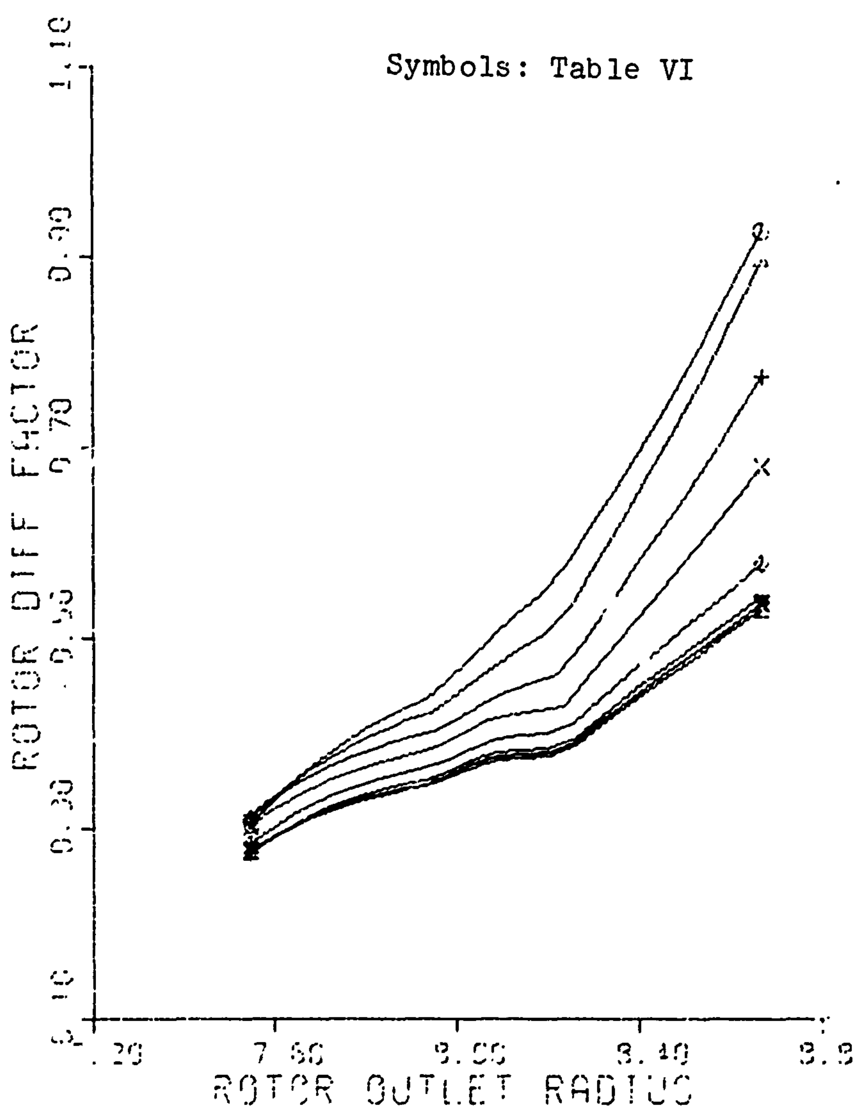


Fig. 27. Rotor Diffusion Factor vs Outlet Radius
(50% Speed)

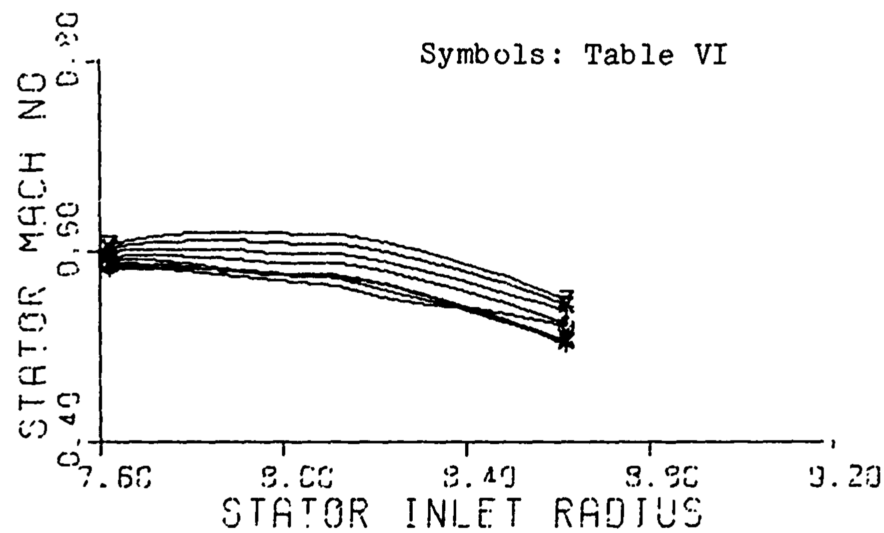


Fig. 28. Stator Mach Number vs Inlet Radius
(50% Speed)

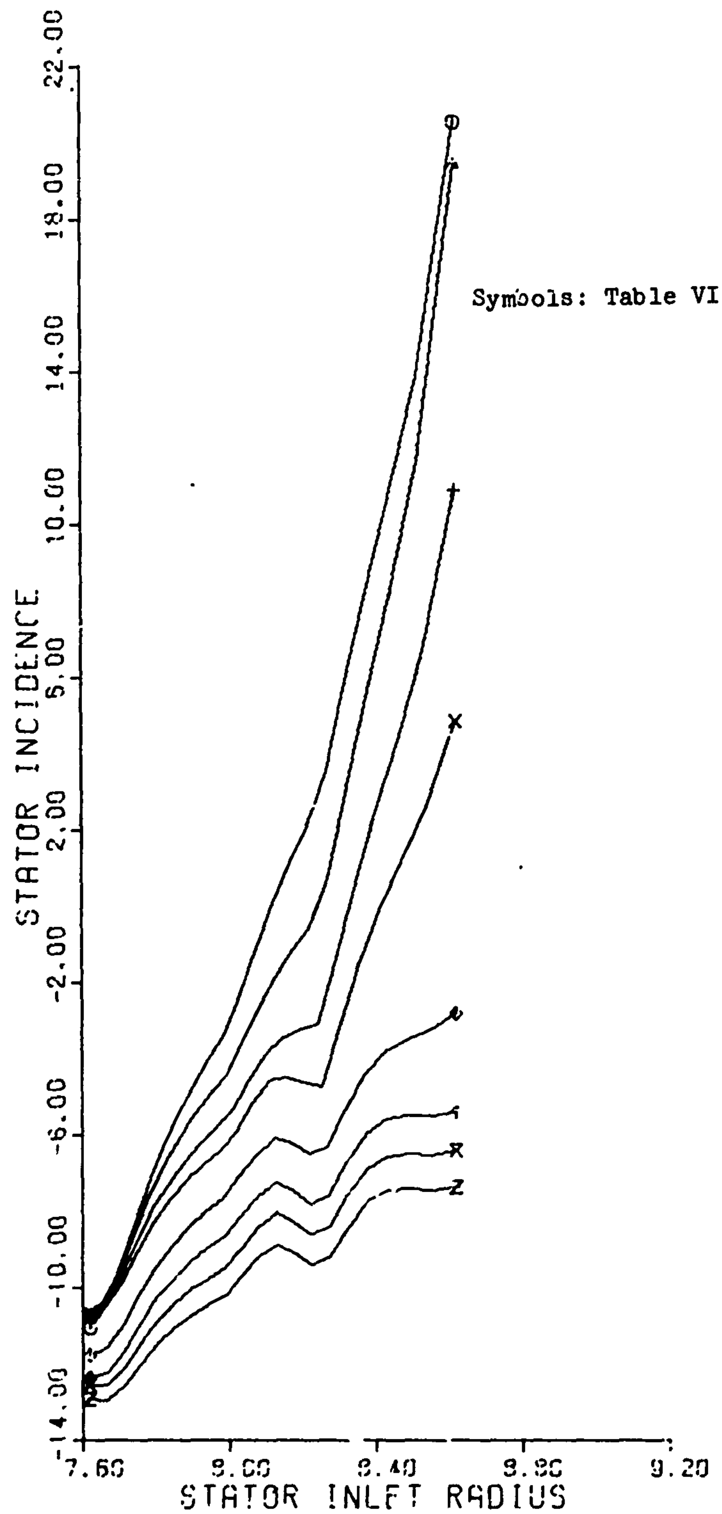


Fig. 29. Stator Incidence vs Inlet Radius (50% Speed)

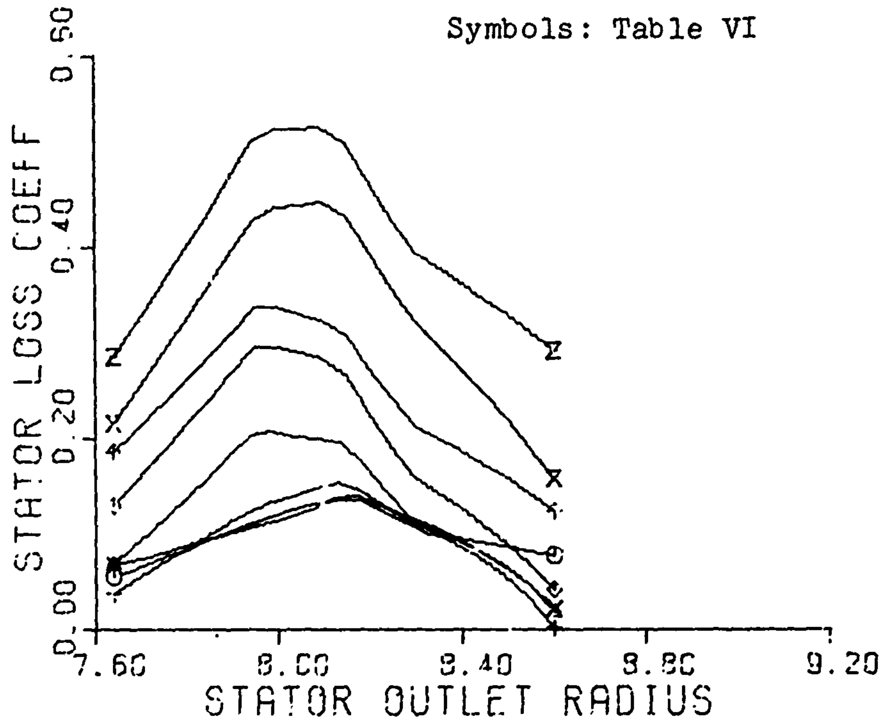


Fig. 30. Stator Loss Coefficient vs Outlet Radius (50% Speed)

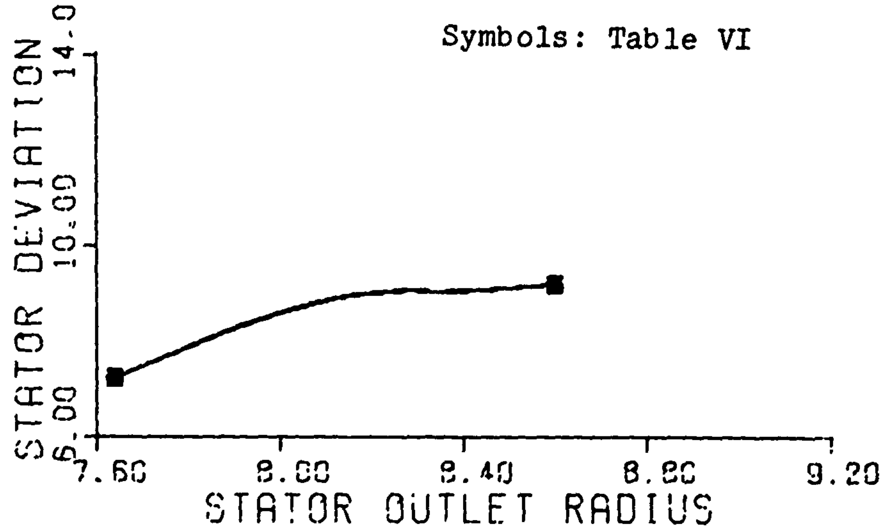


Fig. 31. Stator Deviation vs Outlet Radius (50% Speed)

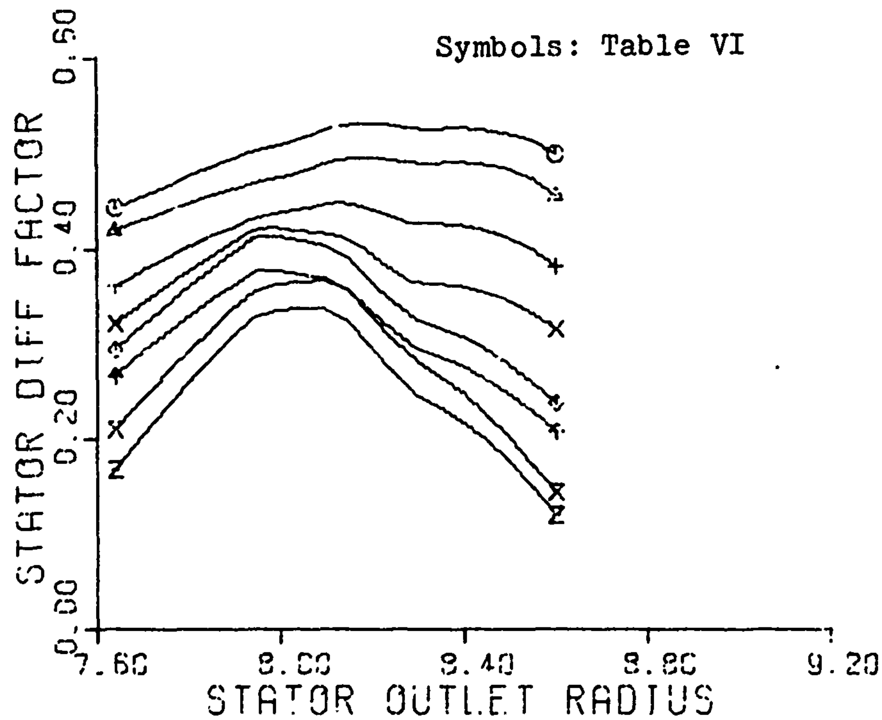


Fig. 32. Stator Diffusion Factor vs Outlet Radius
(50% Speed)

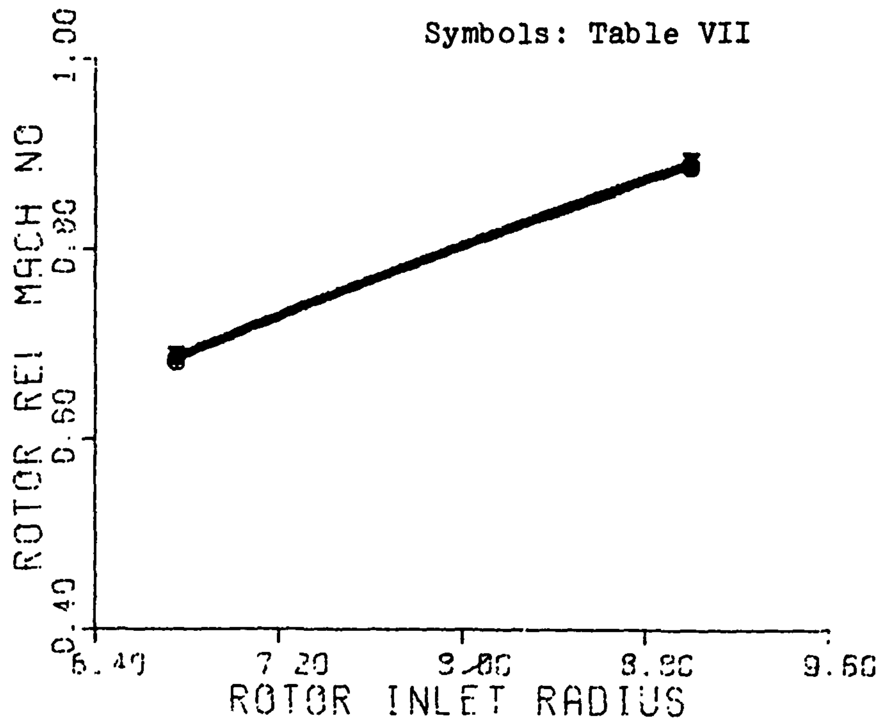


Fig. 33. Rotor Relative Mach Number vs Inlet Radius (60% Speed)

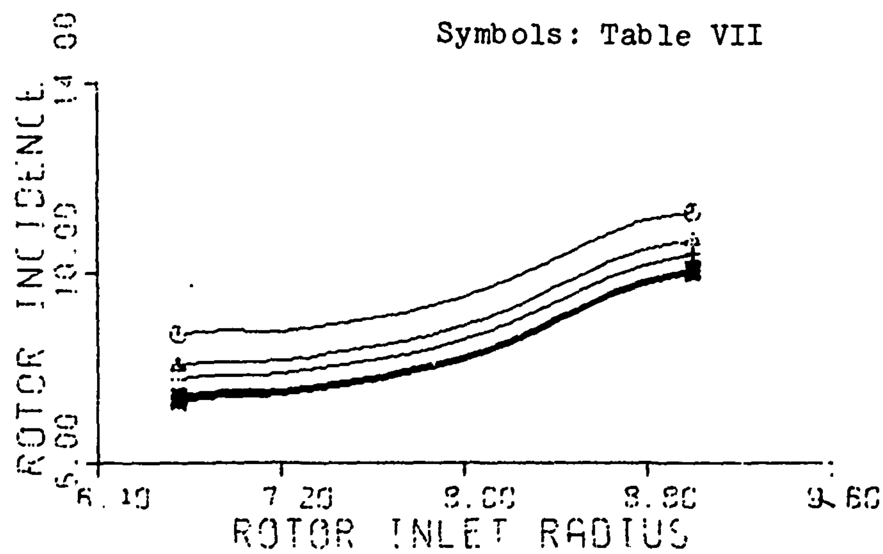


Fig. 34. Rotor Incidence vs Inlet Radius (60% Speed)

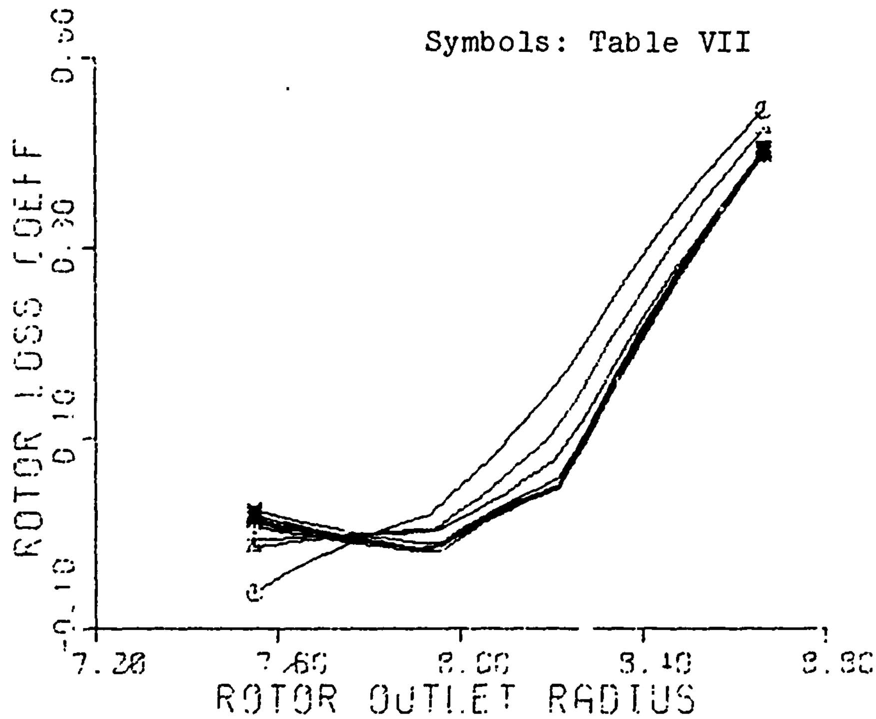


Fig. 35. Rotor Loss Coefficient vs Outlet Radius (60% Speed)

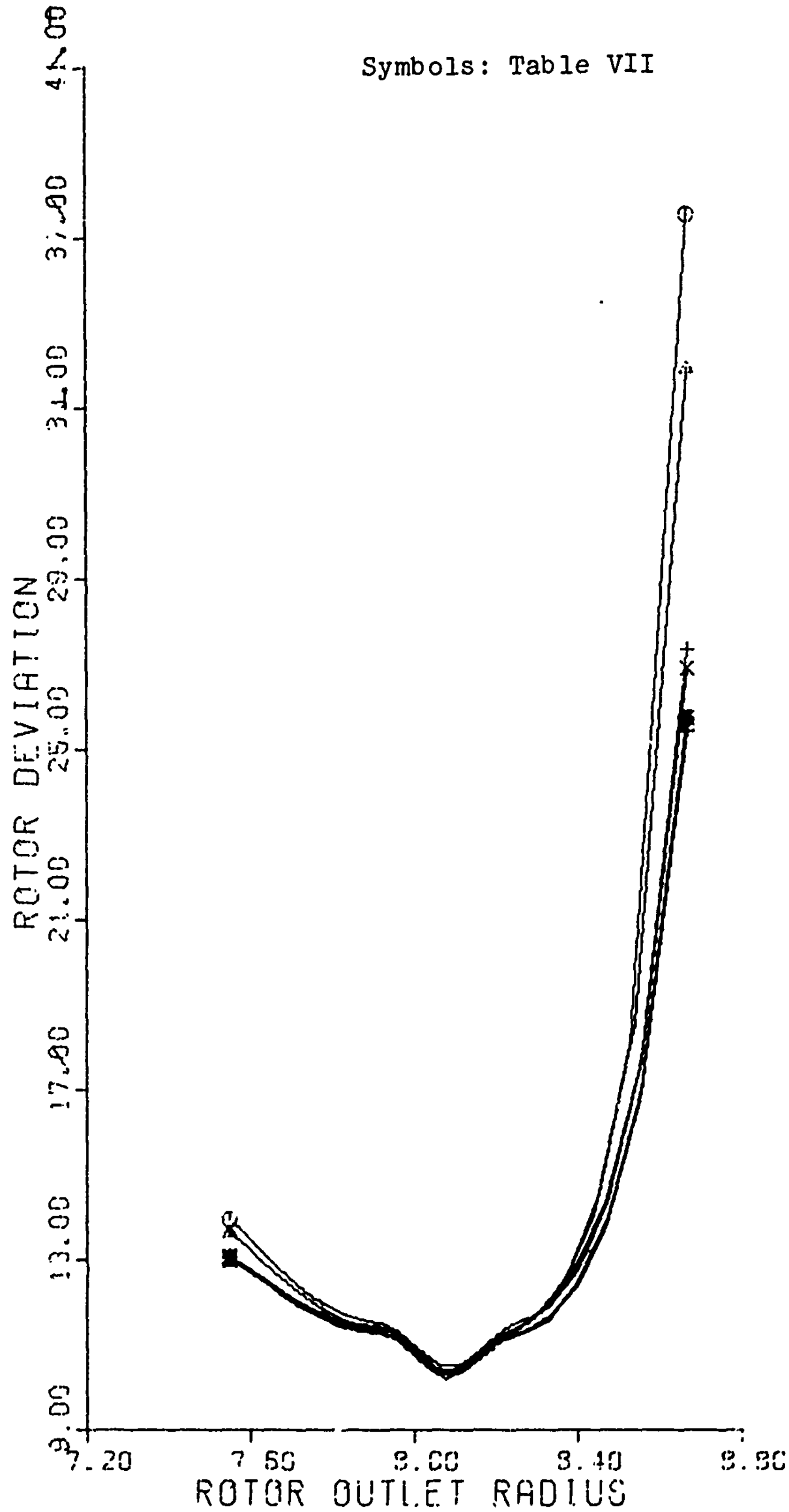


Fig. 36. Rotor Deviation vs Outlet Radius (60% Speed)

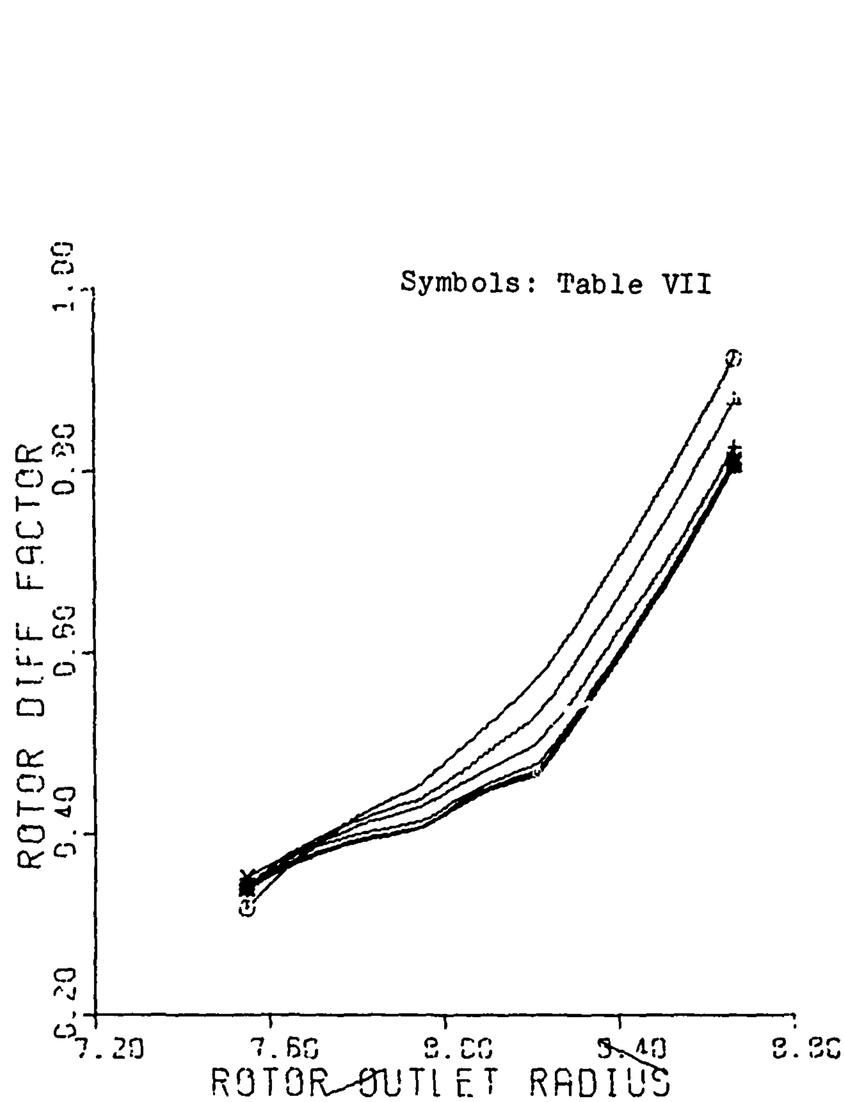


Fig. 37. Rotor Diffusion Factor vs Outlet Radius (60% Speed)

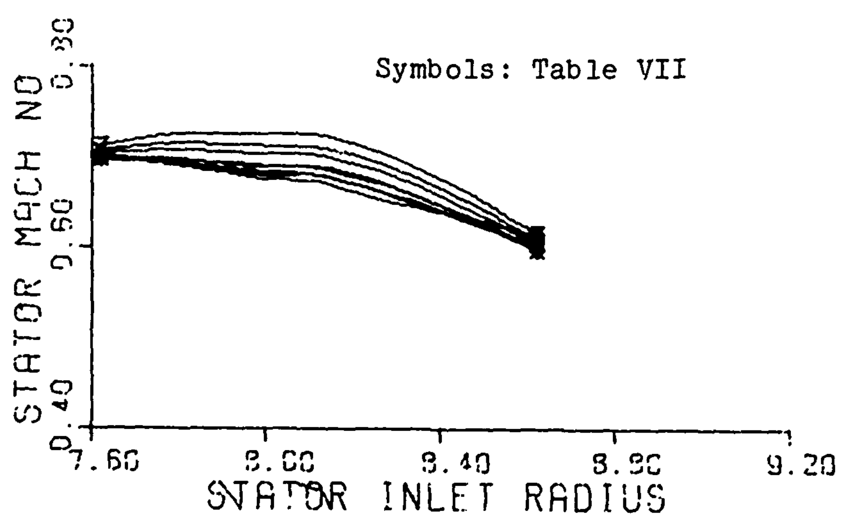


Fig. 38. Stator Mach Number vs Inlet Radius (60% Speed)

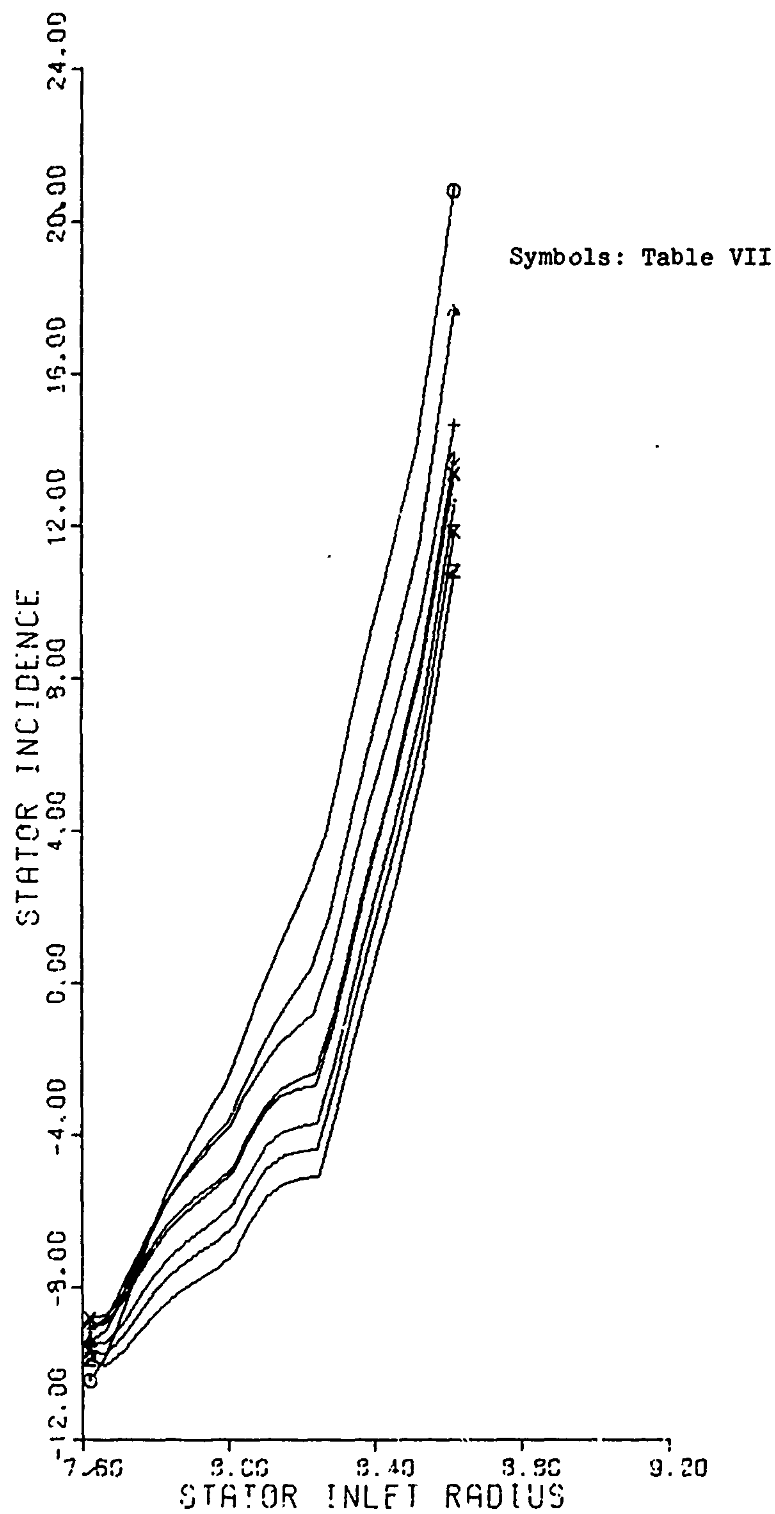


Fig. 39. Stator Incidence vs Inlet Radius
(60% Speed)

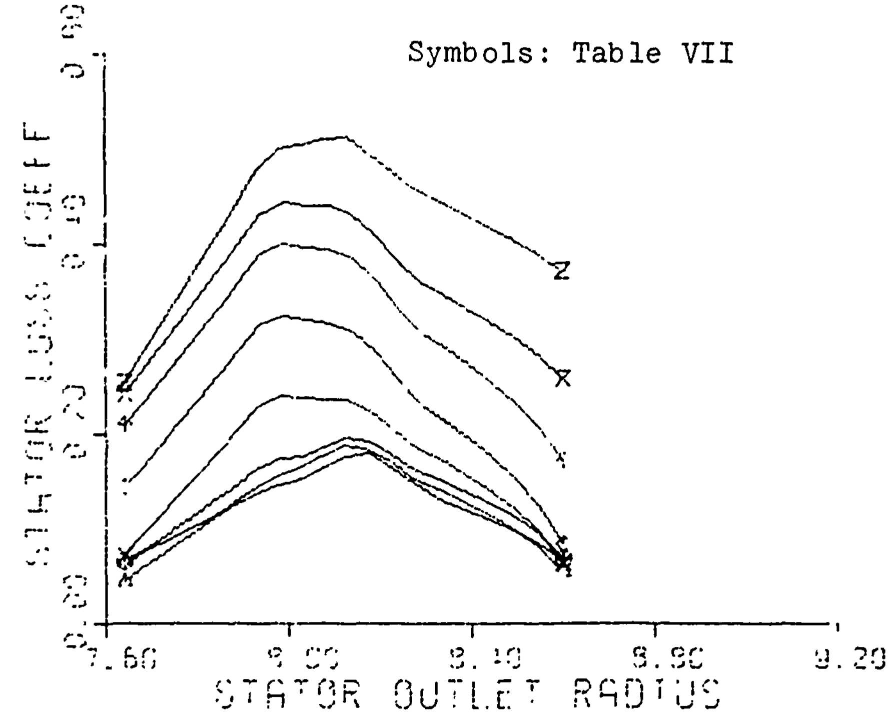


Fig. 40. Stator Loss Coefficient vs Outlet Radius
(60% Speed)

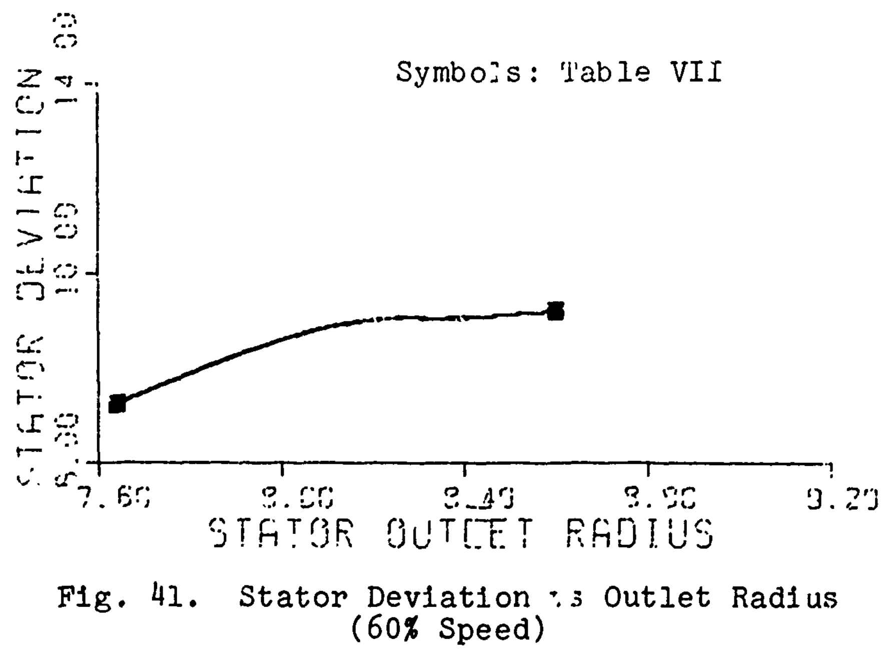


Fig. 41. Stator Deviation vs Outlet Radius
(60% Speed)

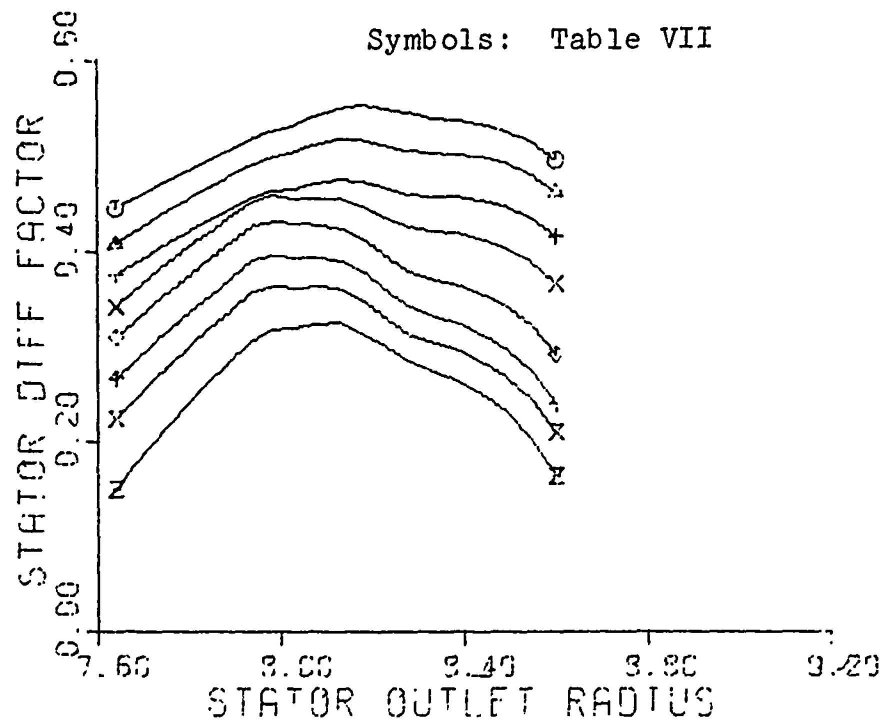


Fig. 42. Stator Diffusion Factor vs Outlet Radius
(60% Speed)

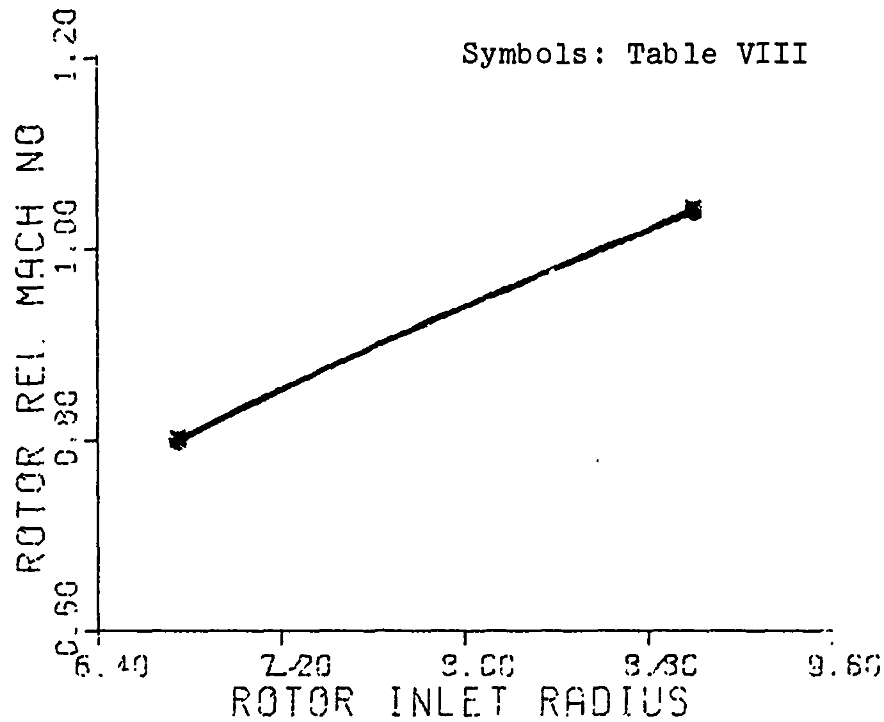


Fig. 43. Rotor Relative Mach Number vs Inlet Radius
(70% Speed)

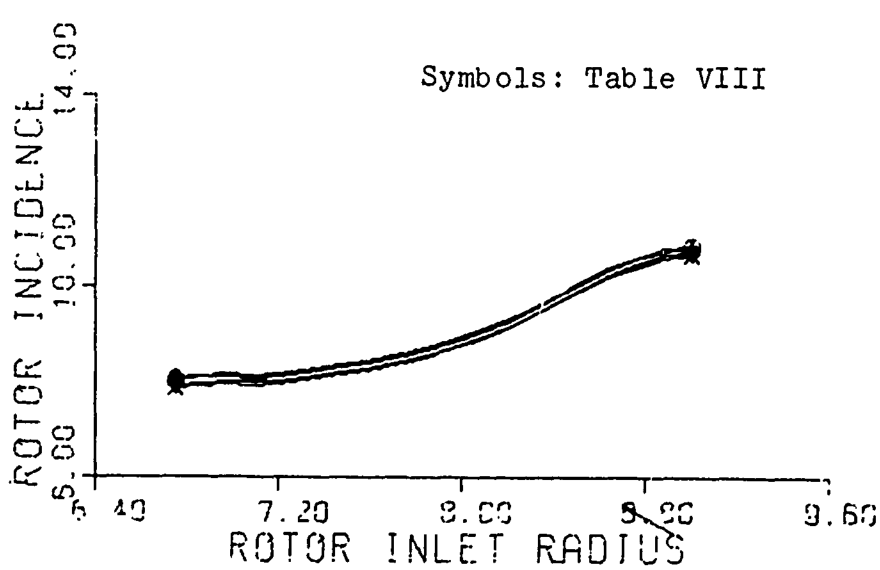


Fig. 44. Rotor Incidence vs Inlet Radius
(70% Speed)

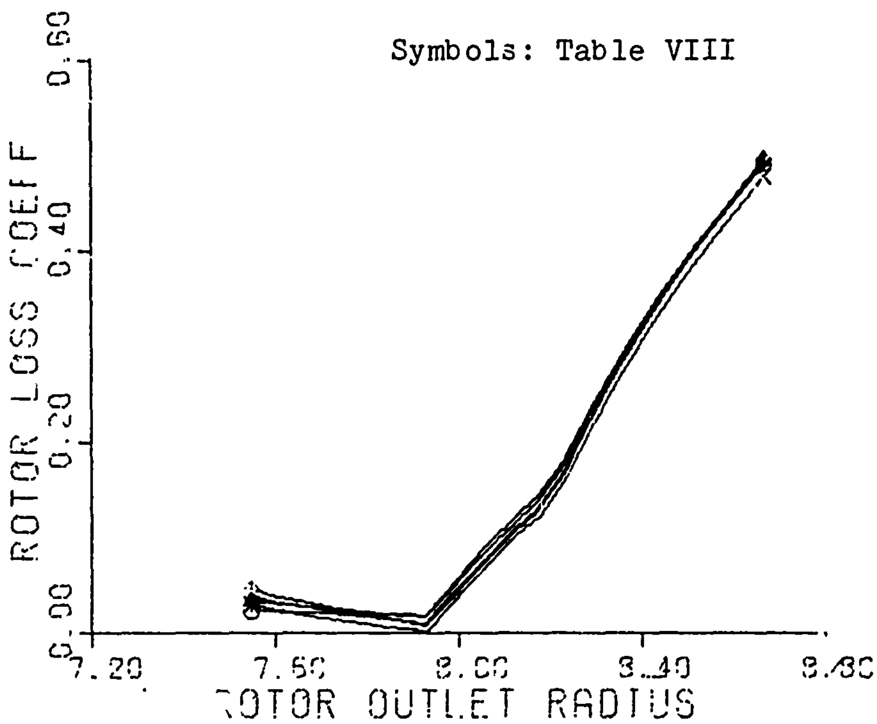


Fig. 45. Rotor Loss Coefficient vs Outlet Radius (70% Speed)

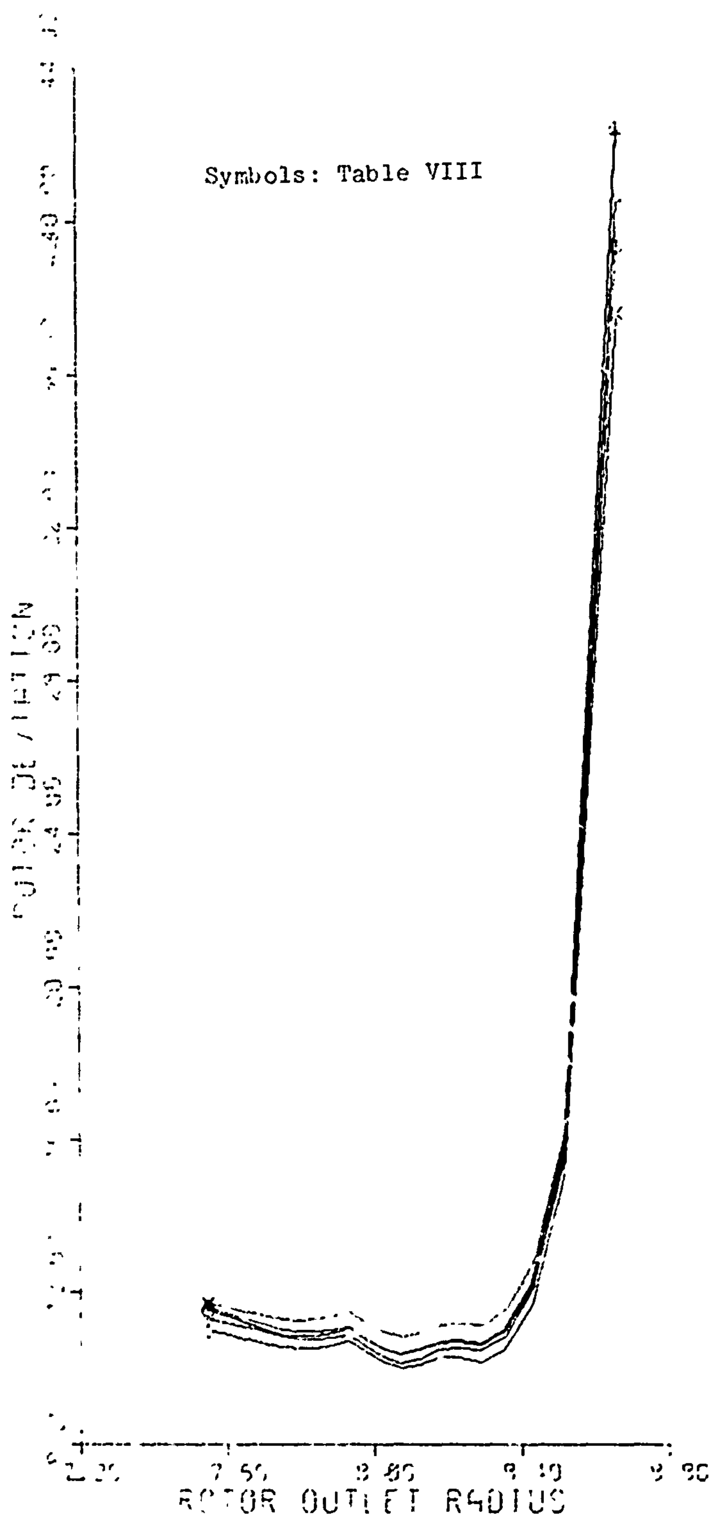


Fig. 46. Rotor Deviation vs Outlet Radius
(70% Speed)

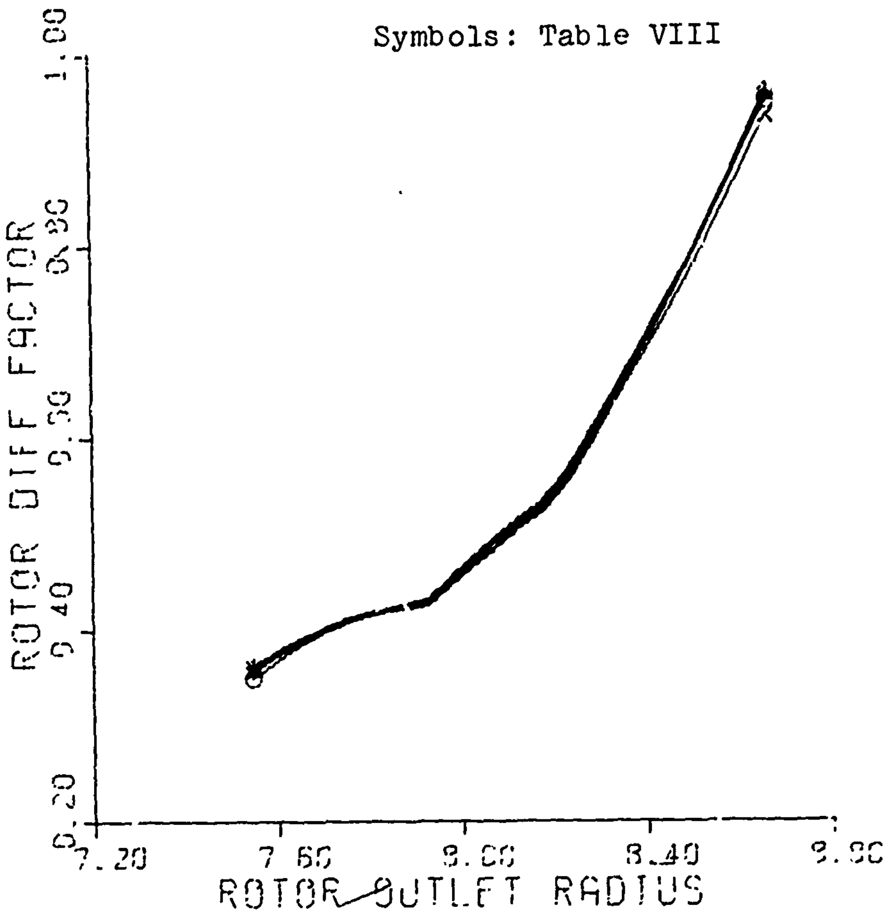


Fig. 47. Rotor Diffusion Factor vs Outlet Radius (70% Speed)

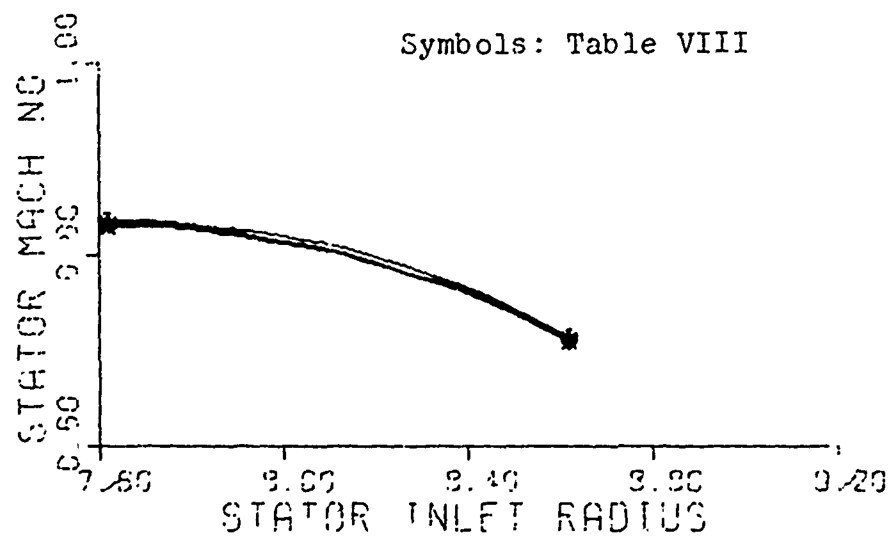


Fig. 48. Stator Mach Number vs Inlet Radius (70% Speed)

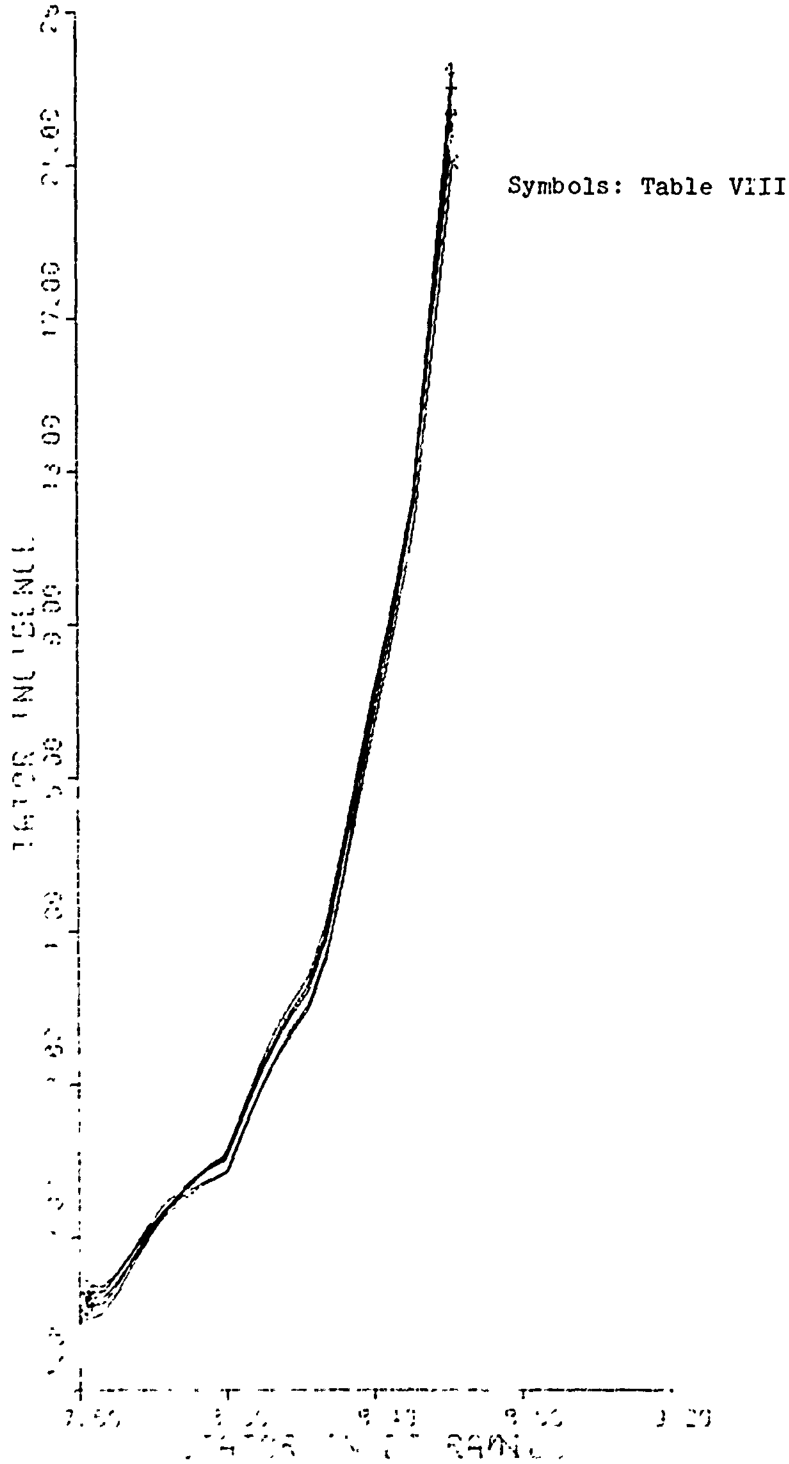


Fig. 49. Stator Incidence vs Inlet Radius
(70% Speed)

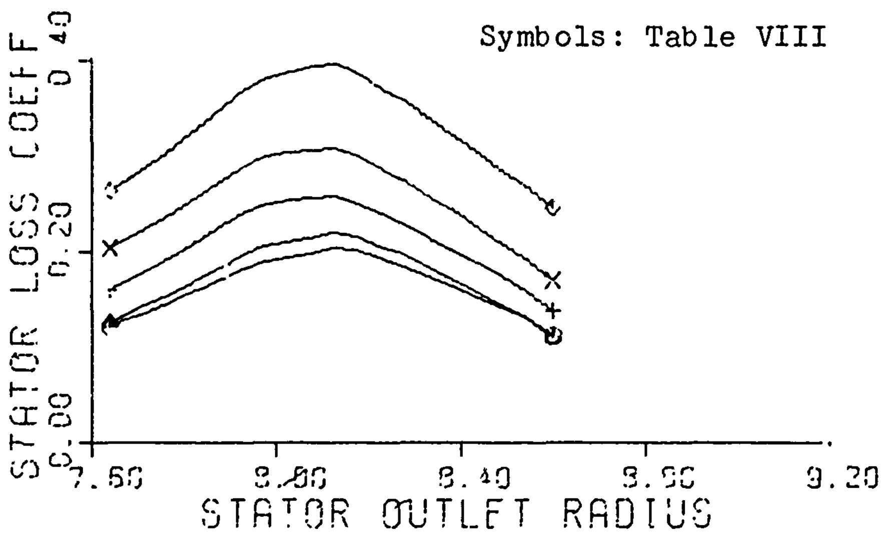


Fig. 50. Stator Loss Coefficient vs Outlet Radius (70% Speed)

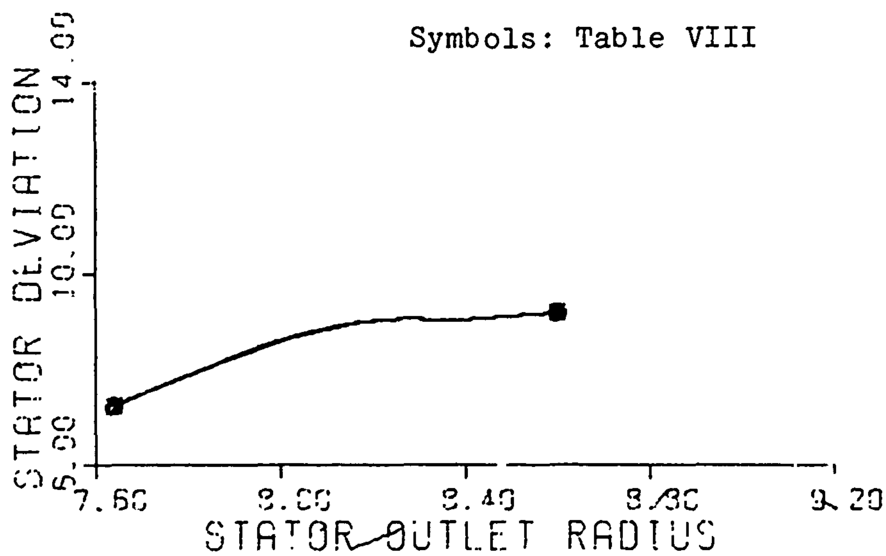


Fig. 51. Stator Deviation vs Outlet Radius (70% Speed)

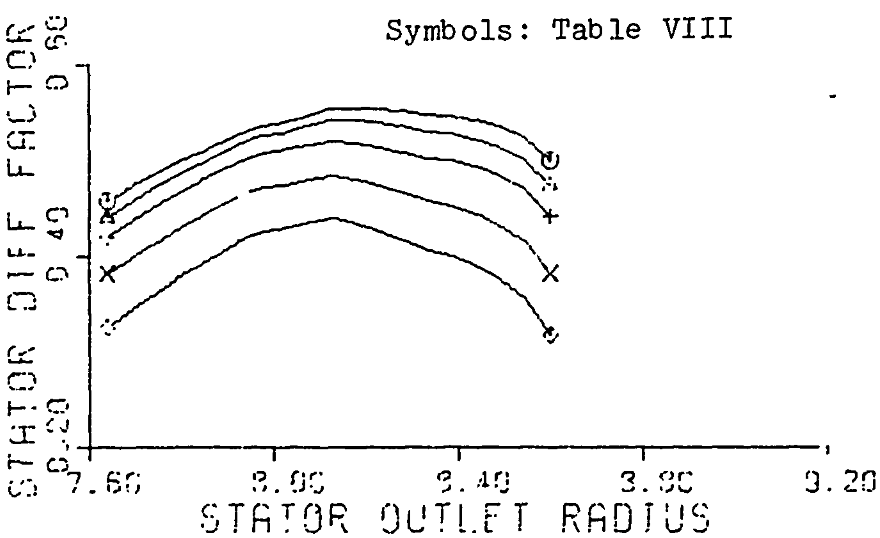


Fig. 52. Stator Diffusion Factor vs Outlet Radius
(70% Speed)

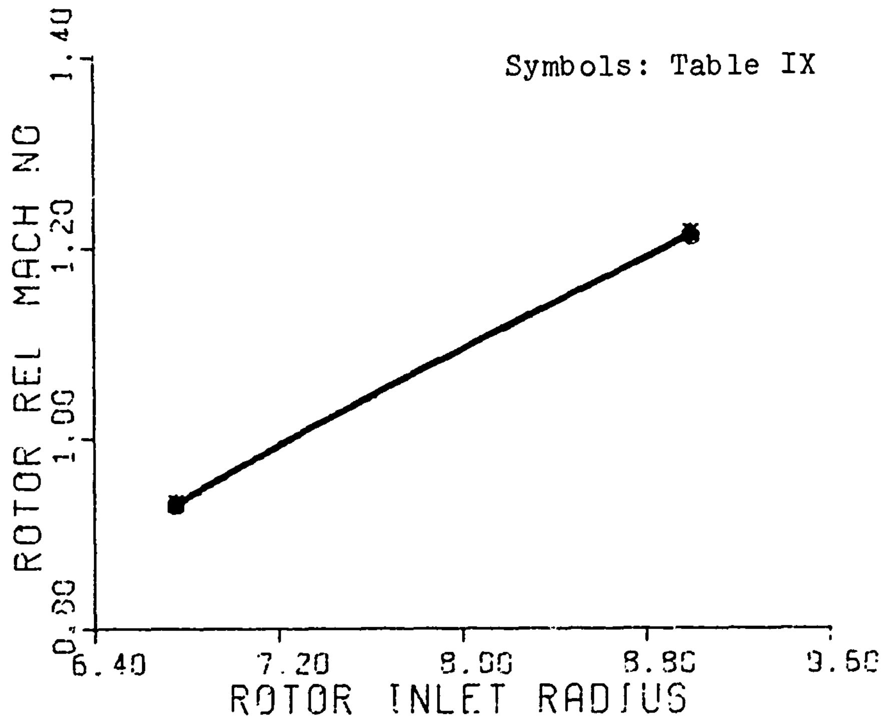


Fig. 53. Rotor Relative Mach Numbers vs Inlet Radius
(82% Speed)

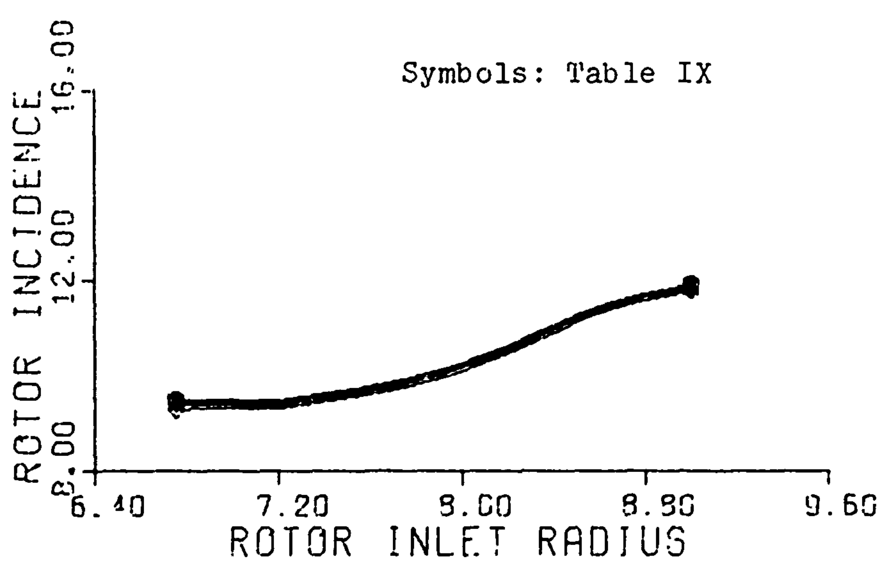


Fig. 54. Rotor Incidence vs Inlet Radius
(82% Speed)

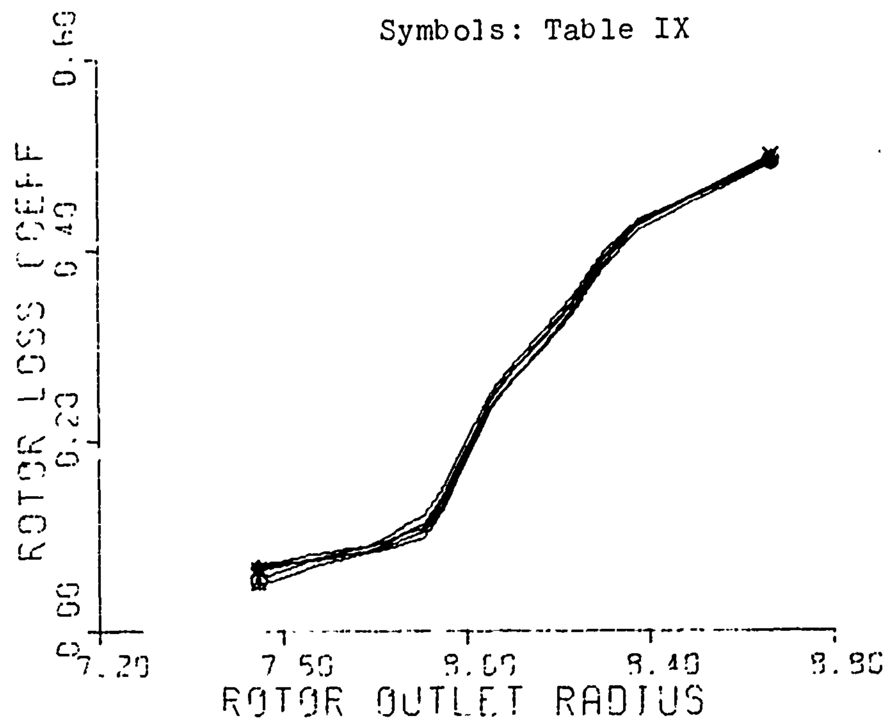


Fig. 55. Rotor Loss Coefficient vs Outlet Radius
(82% Speed)

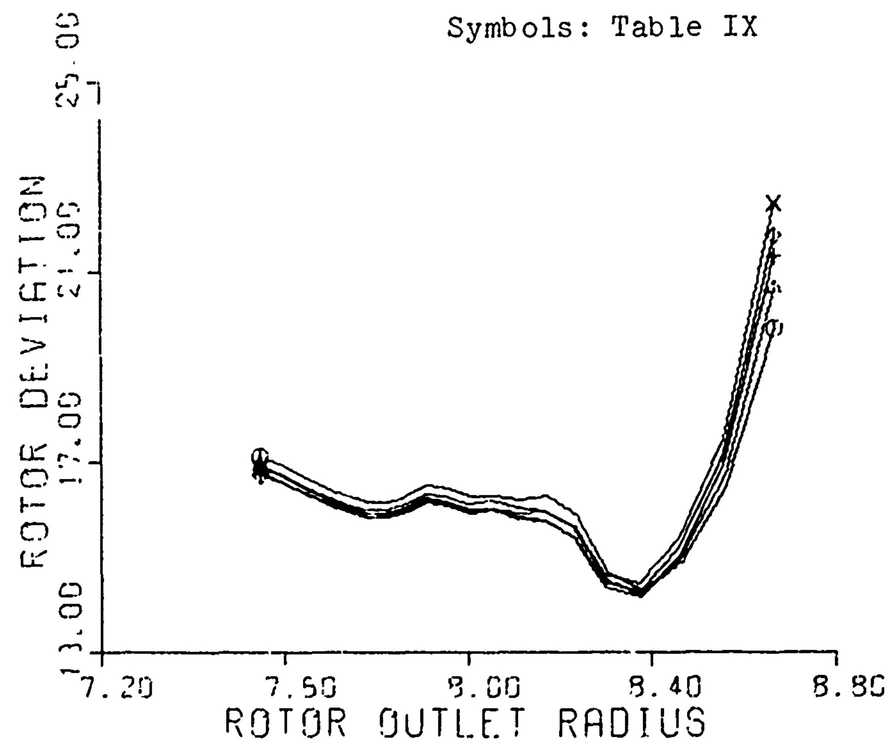


Fig. 56. Rotor Deviation vs Outlet Radius
(82% Speed)

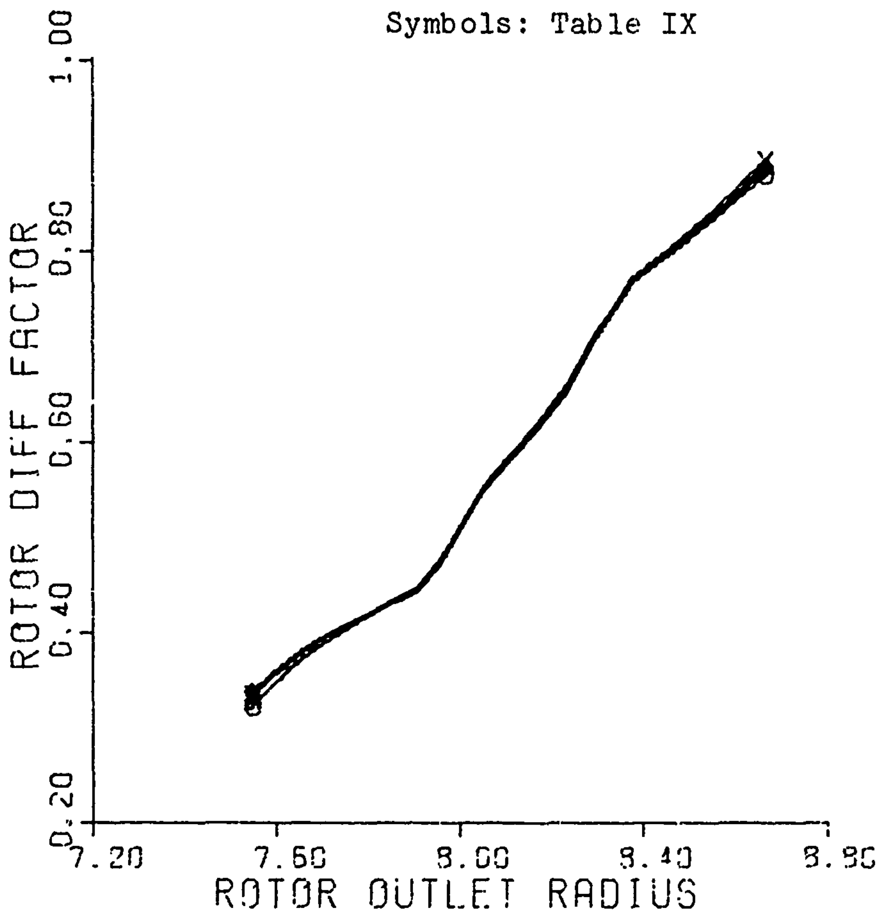


Fig. 57. Rotor Diffusion Factor vs Outlet Radius
(82% Speed)

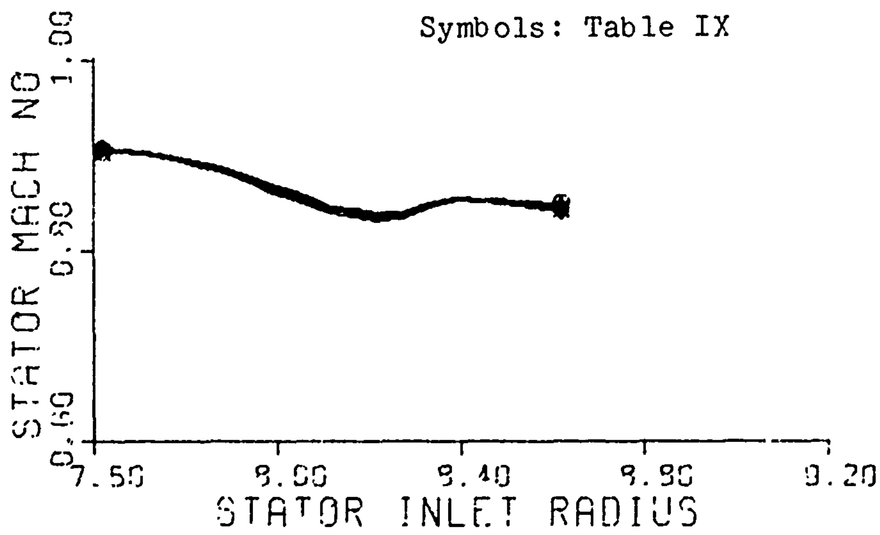


Fig. 58. Stator Mach Number vs Inlet Radius
(82% Speed)

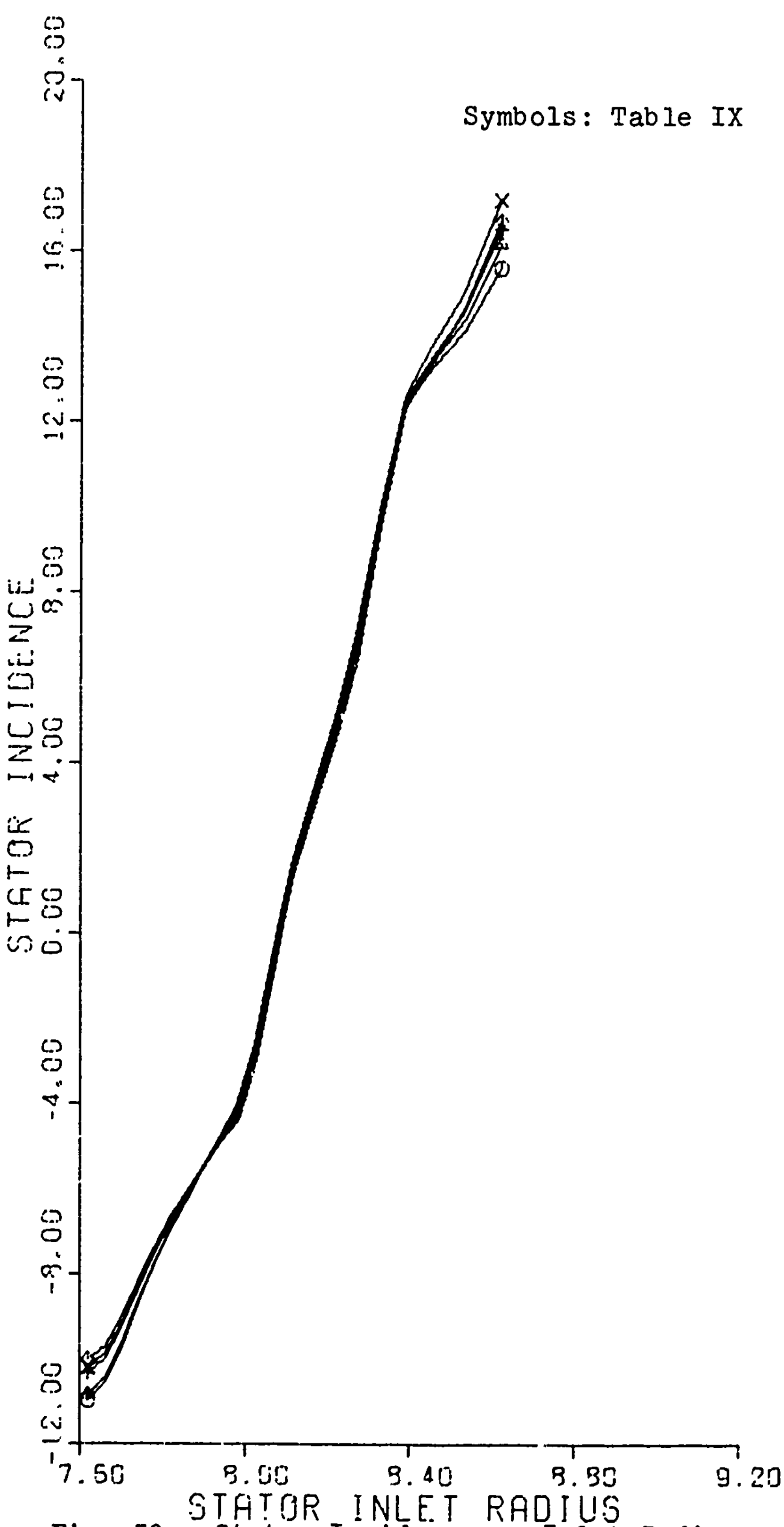


Fig. 59. Stator Incidence vs Inlet Radius
(82% Speed)

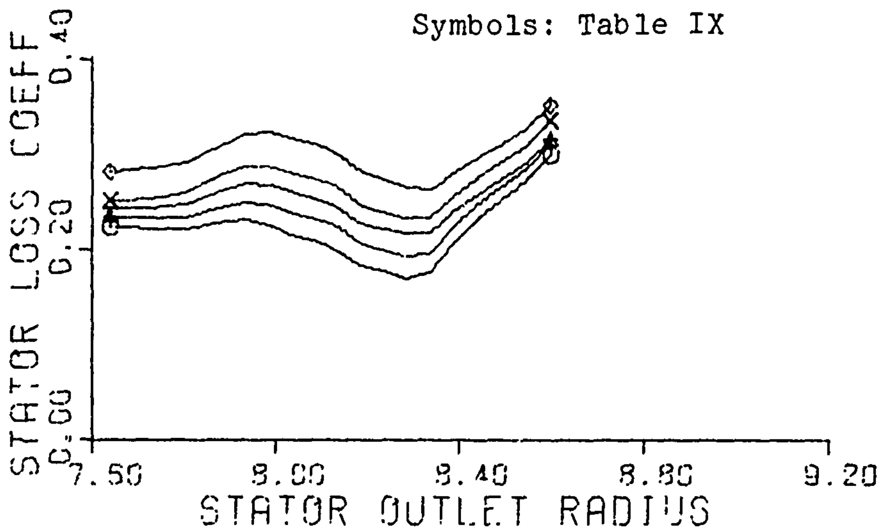


Fig. 60. Stator Loss Coefficient vs Outlet Radius (82% Speed)

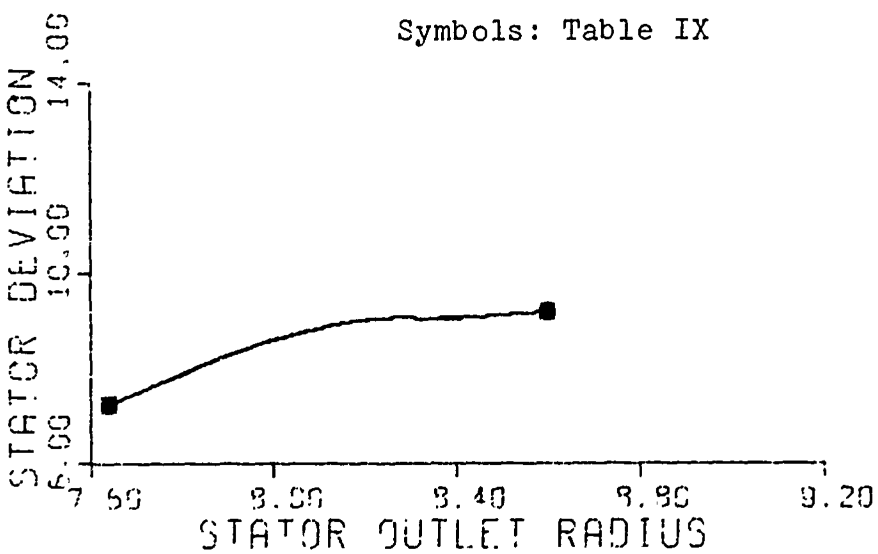


Fig. 61. Stator Deviation vs Outlet Radius (82% Speed)

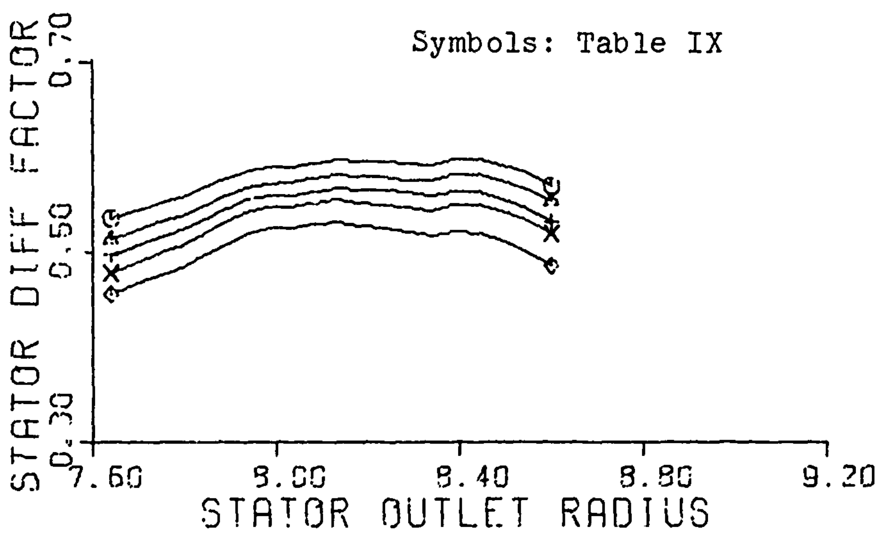


Fig. 62. Stator Diffusion Factor vs Outlet Radius
(82% Speed)

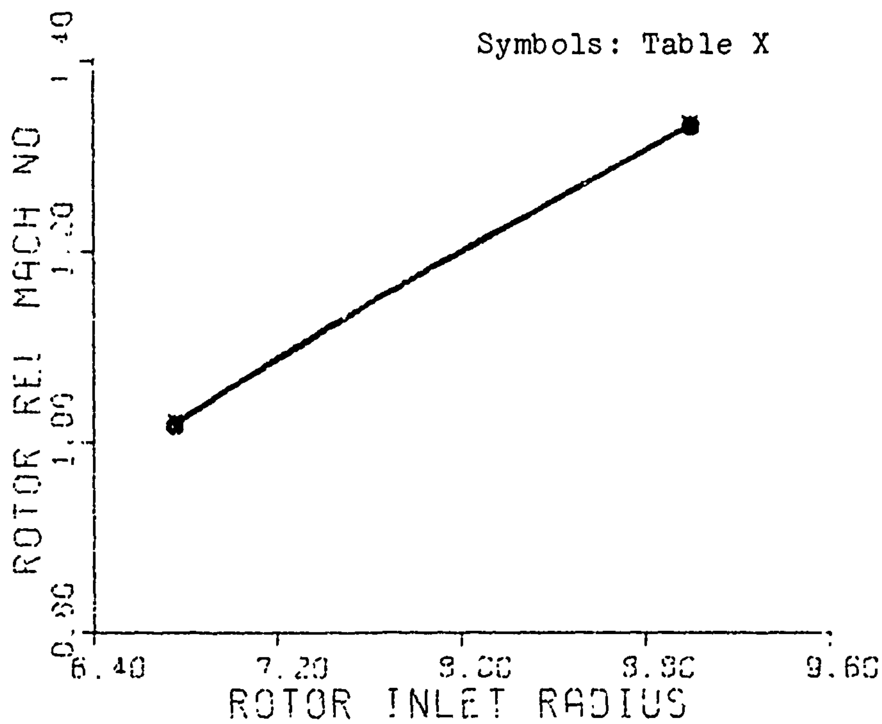


Fig. 63. Rotor Relative Mach Number vs Inlet Radius
(90% Speed)

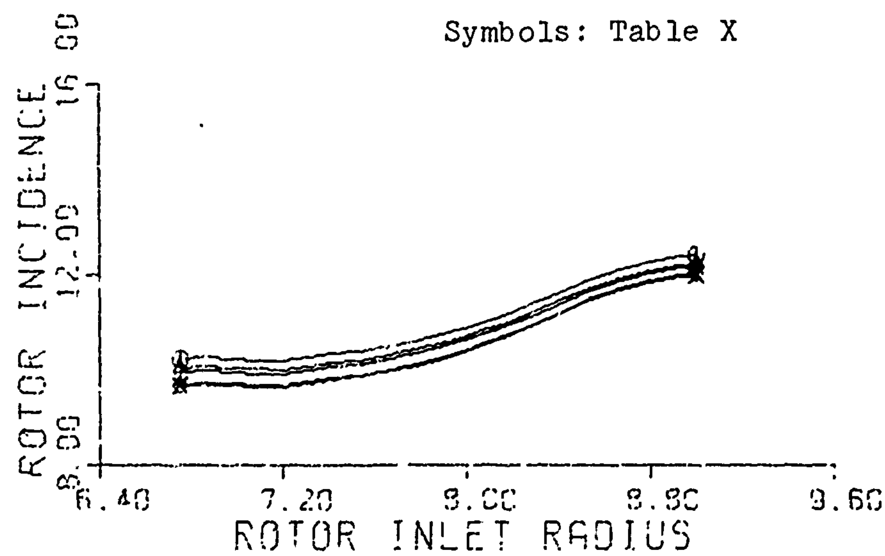


Fig. 64. Rotor Incidence vs Inlet Radius
(90% Speed)

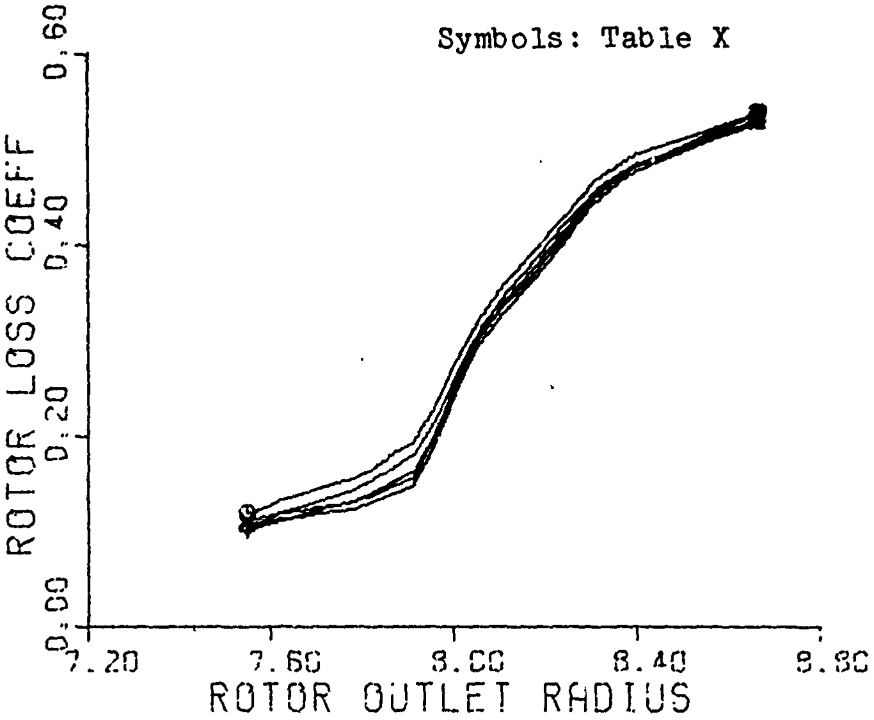


Fig. 65. Rotor Loss Coefficient vs Outlet Radius
(90% Speed)

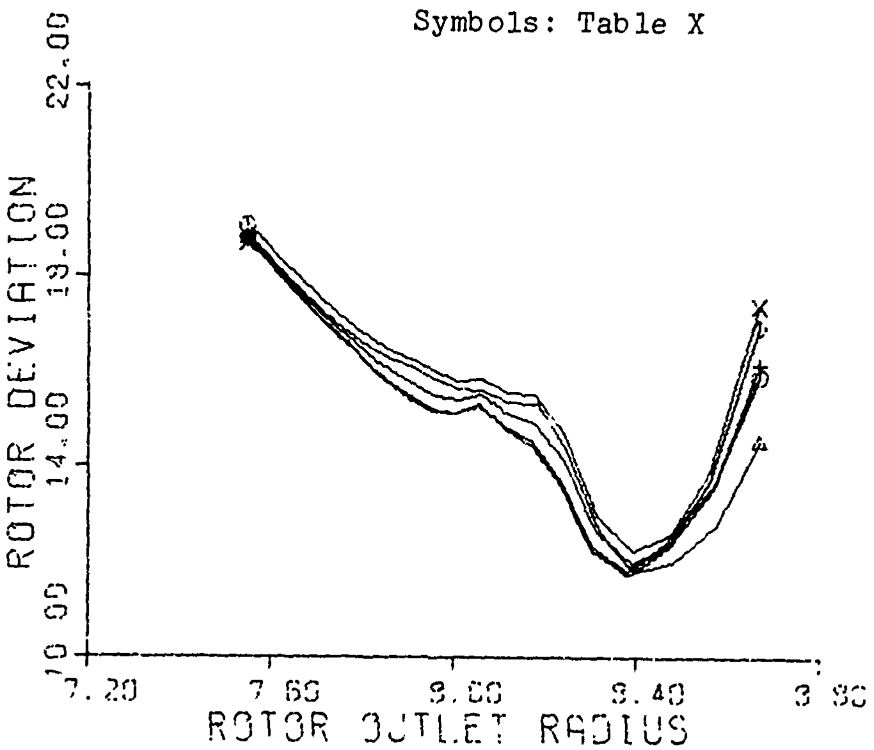


Fig. 66. Rotor Deviation vs Outlet Radius
(90% Speed)

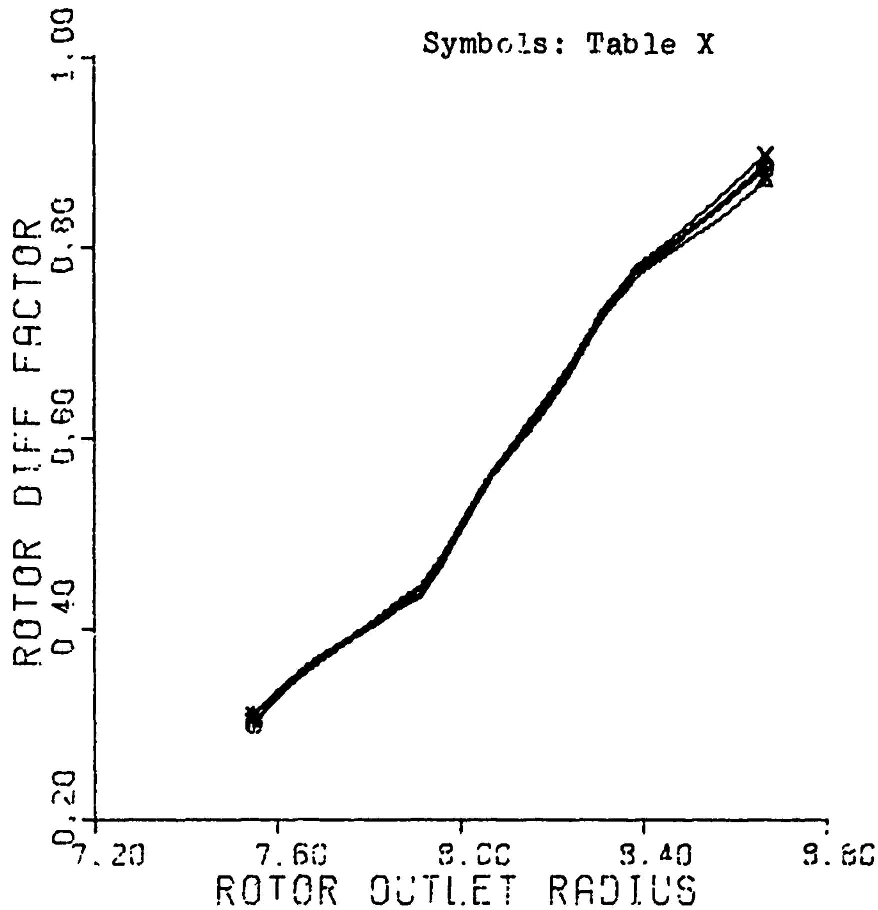


Fig. 67. Rotor Diffusion Factor vs Outlet Radius
(90% Speed)

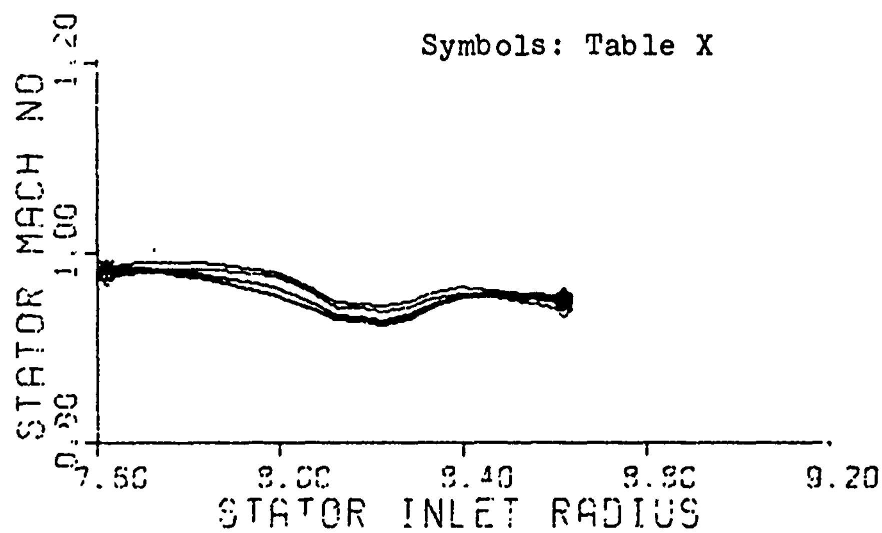


Fig. 68. Stator Mach Number vs Inlet Radius
(90% Speed)

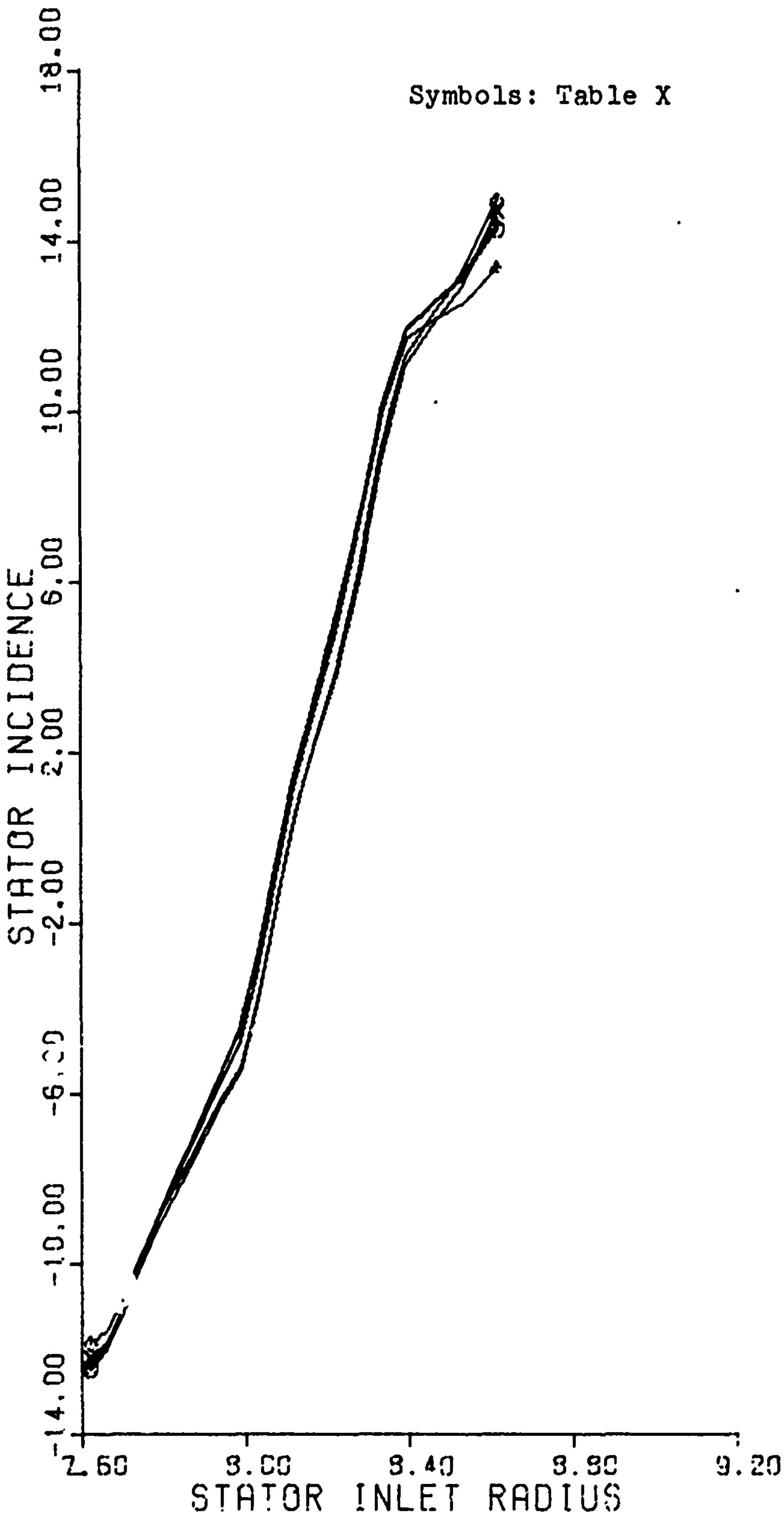


Fig. 69. Stator Incidence vs Inlet Radius (90% Speed)

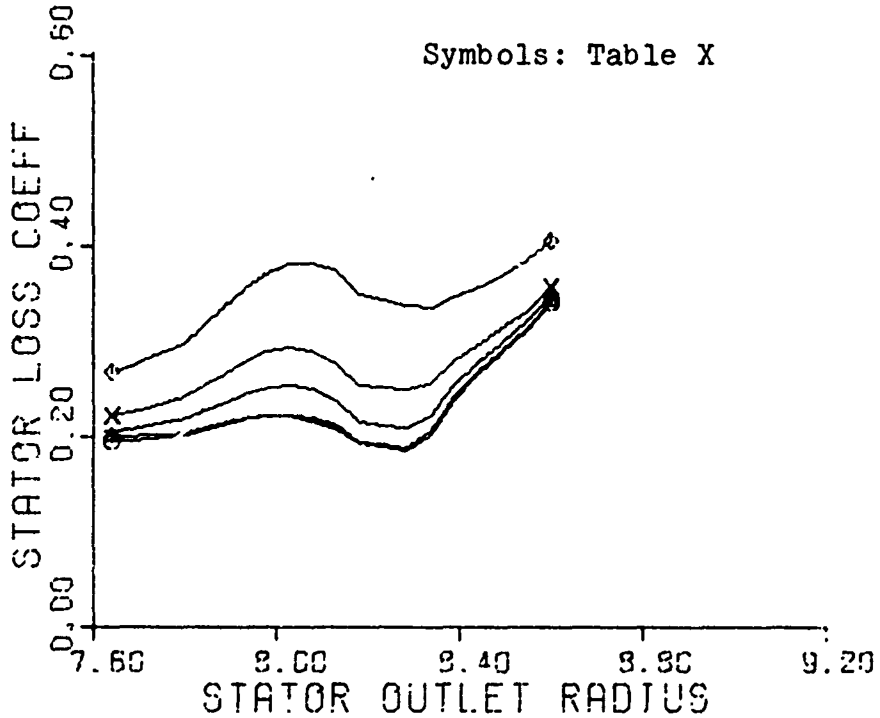


Fig. 70. Stator Loss Coefficient vs Outlet Radius (90% Speed)

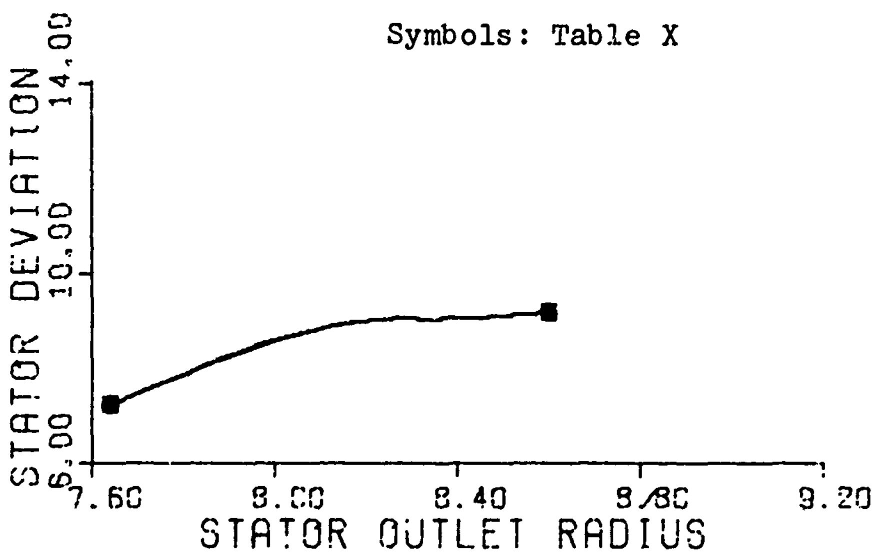


Fig. 71. Stator Deviation vs Outlet Radius (90% Speed)

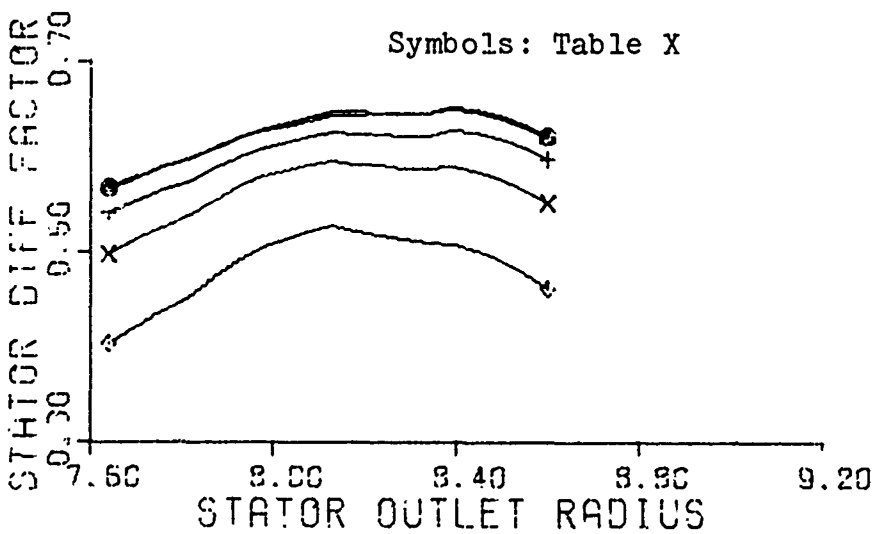


Fig. 72. Stator Diffusion Factor vs Outlet R. ius
(90% Speed)

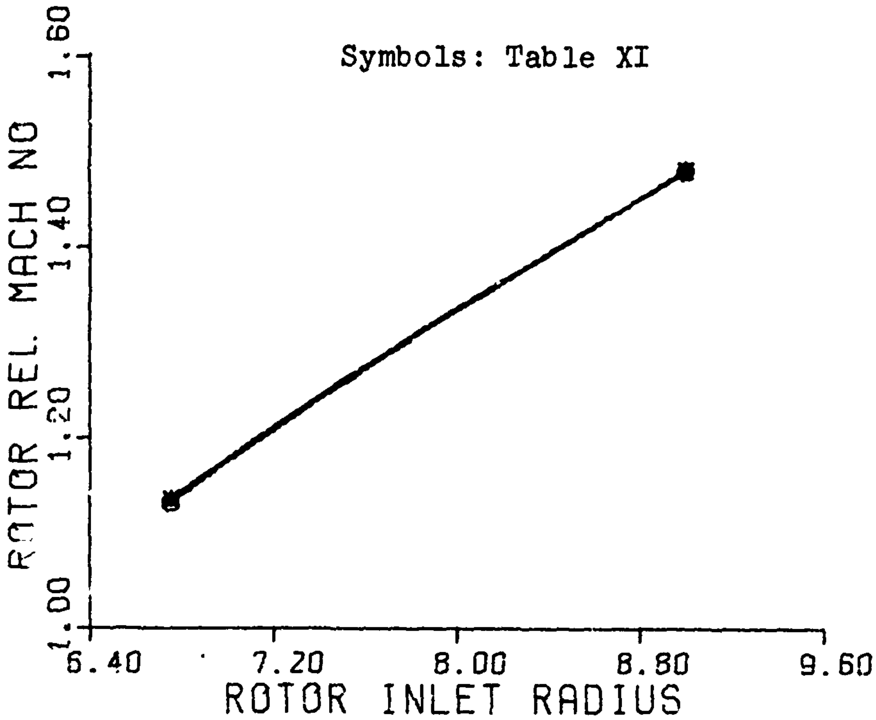


Fig. 73. Rotor Relative Mach Number vs Inlet Radius (100% Speed)

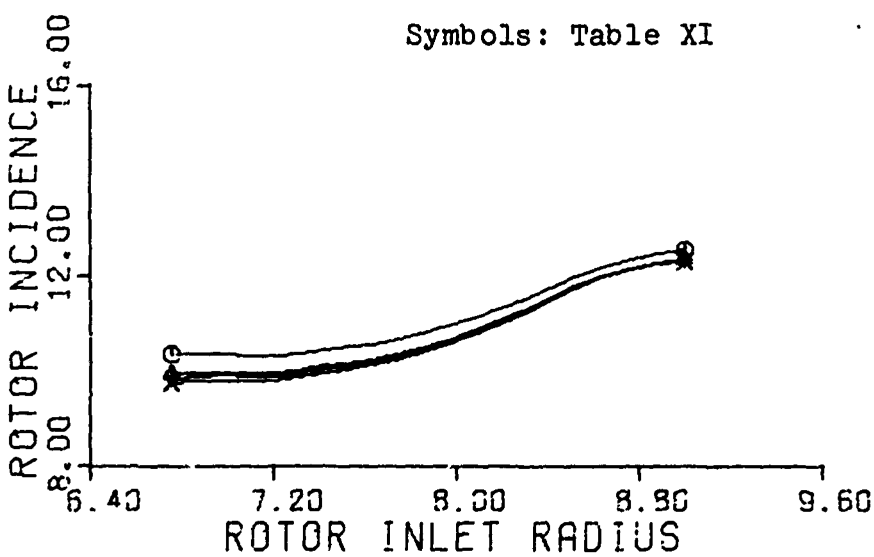


Fig. 74. Rotor Incidence vs Inlet Radius (100% Speed)

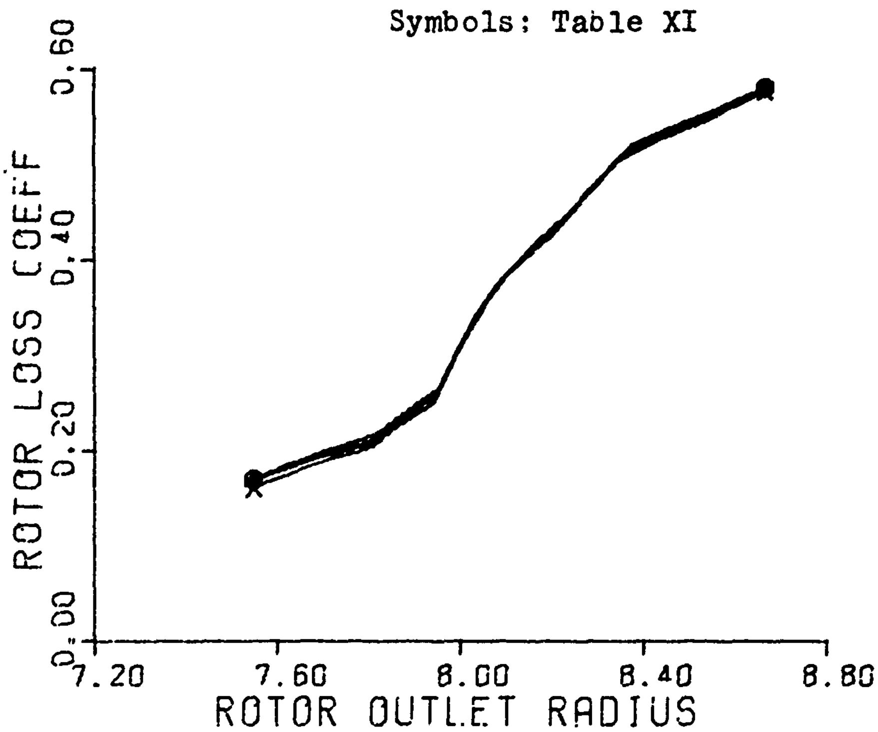


Fig. 75. Rotor Loss Coefficient vs Outlet Radius (100% Speed)

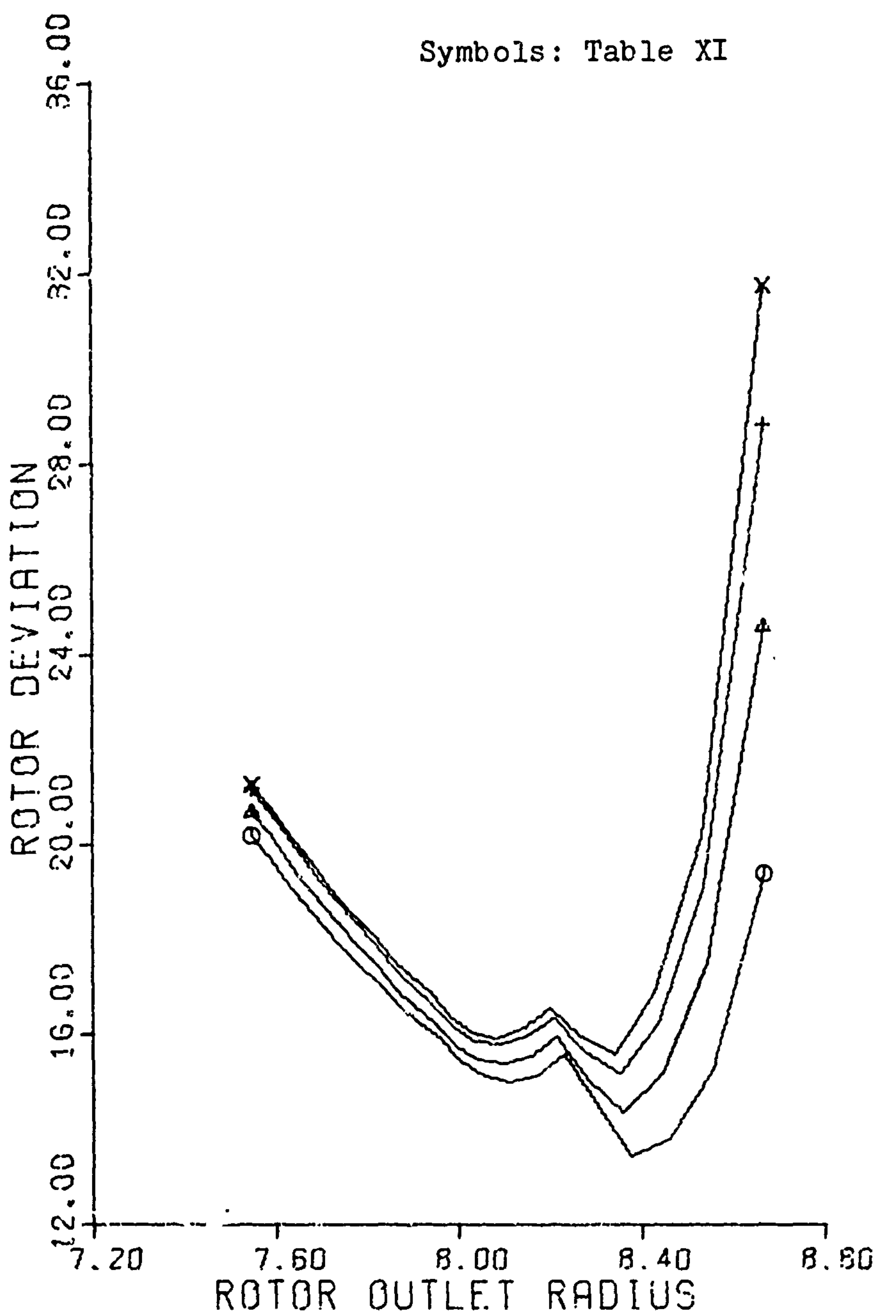


Fig. 76. Rotor Deviation vs Outlet Radius (100% Speed)

Symbols: Table XI

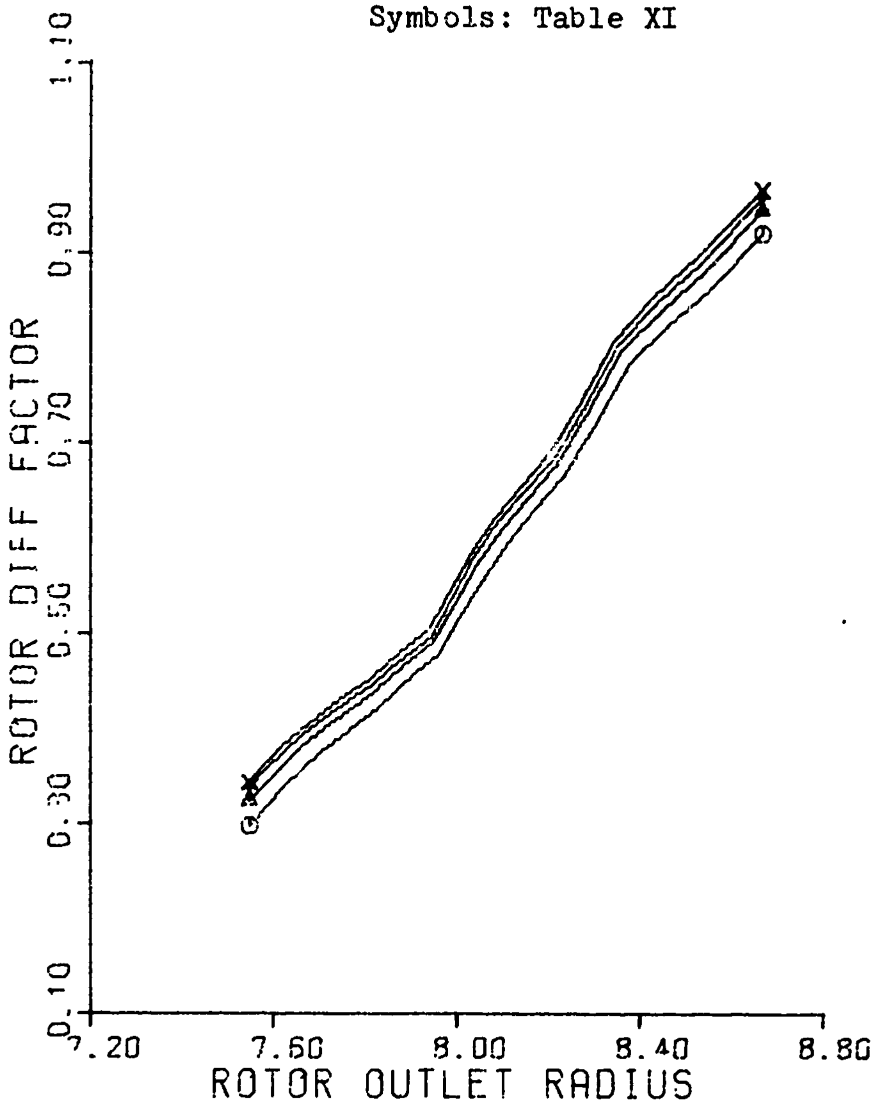


Fig. 77. Rotor Diffusion Factor vs Outlet Radius (100% Speed)

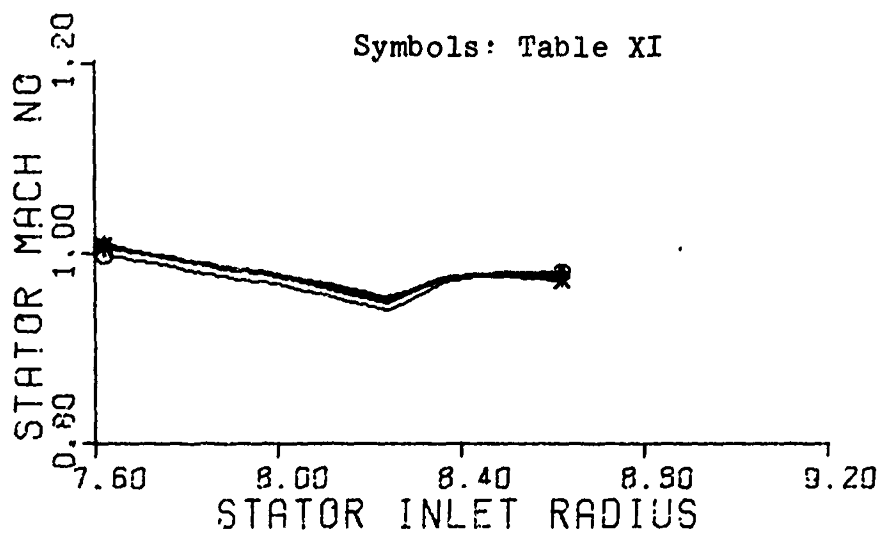


Fig. 78. Stator Mach Number vs Inlet Radius
(100% Speed)

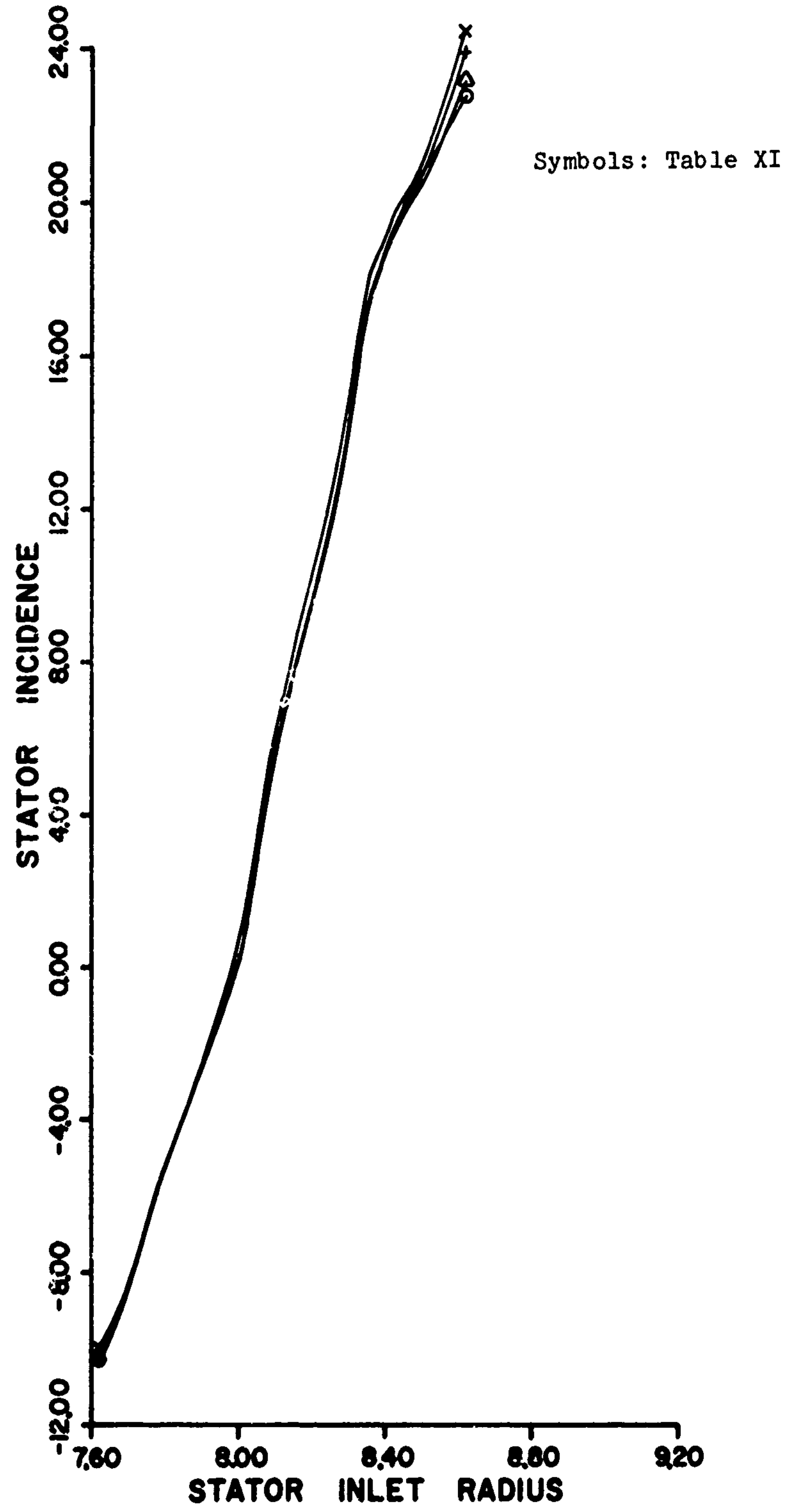


Fig. 79. Stator Incidence vs Inlet Radius
(100% Speed)

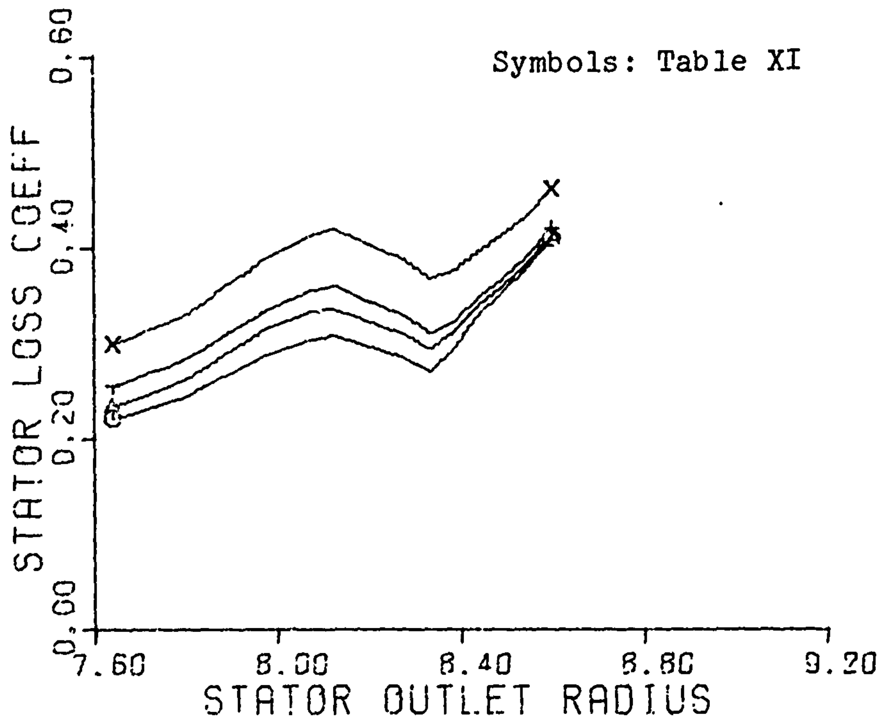


Fig. 80. Stator Loss Coefficient vs Outlet Radius (100% Speed)

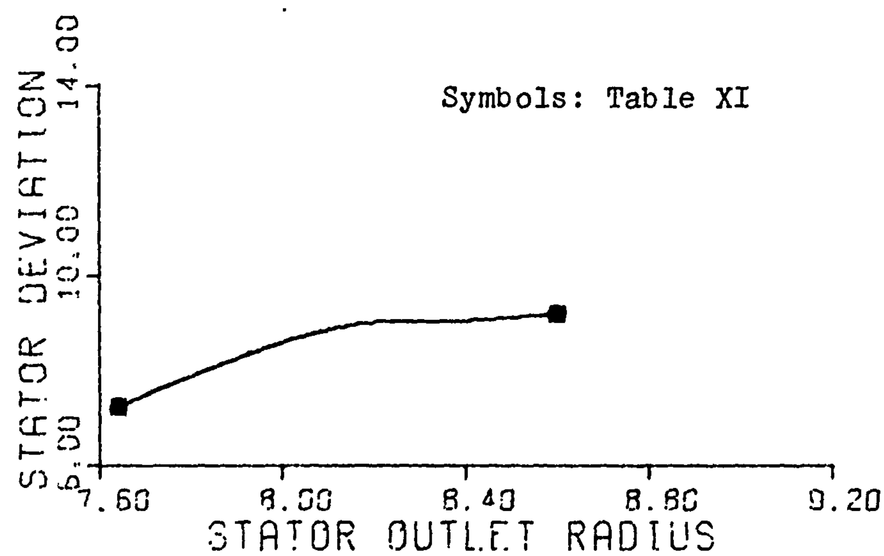


Fig. 81. Stator Deviation vs Outlet Radius (100% Speed)

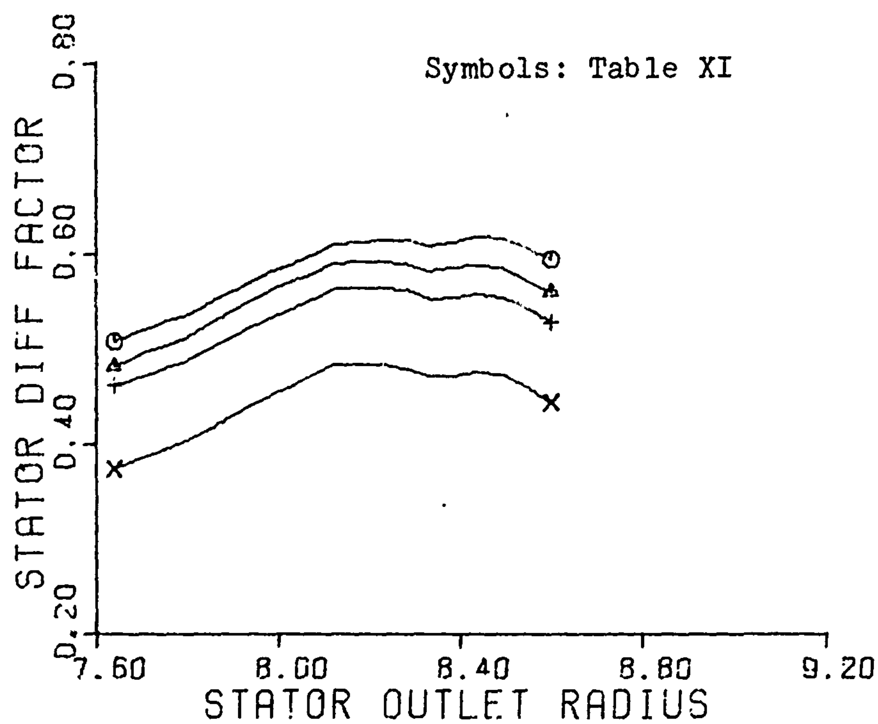


Fig. 82. Stator Diffusion Factor vs Outlet Radius (100% Speed)

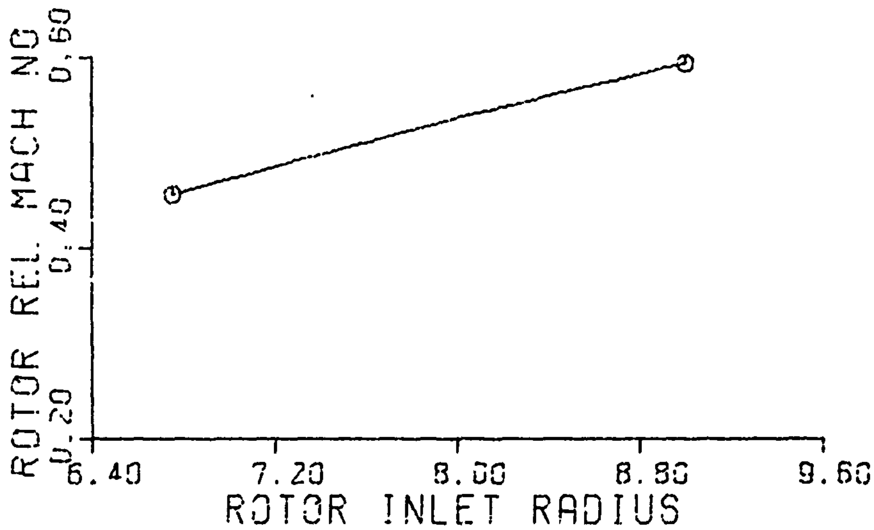


Fig. 83. Rotor Relative Mach Number vs Inlet Radius (Within-Blade Analysis, 40% Speed)

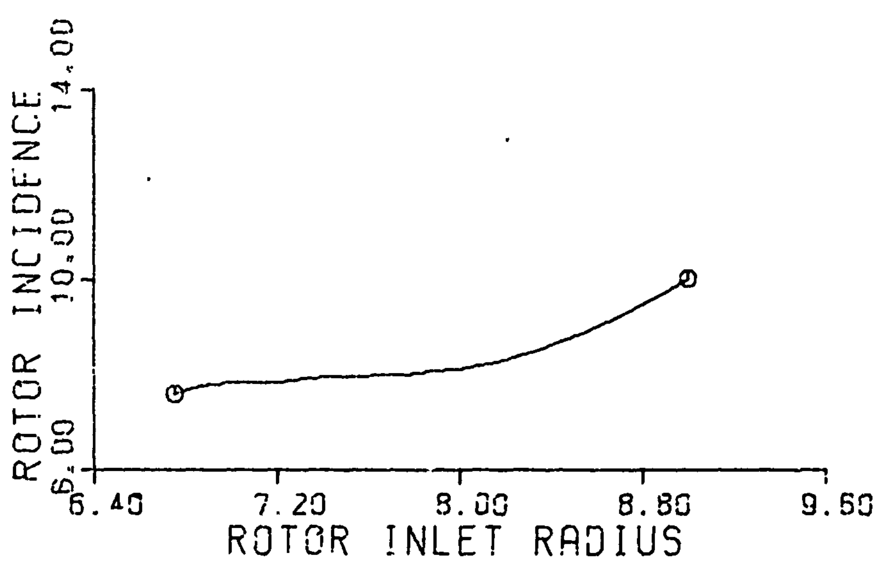


Fig. 84. Rotor Incidence vs Inlet Radius (Within-Blade Analysis, 40% Speed)

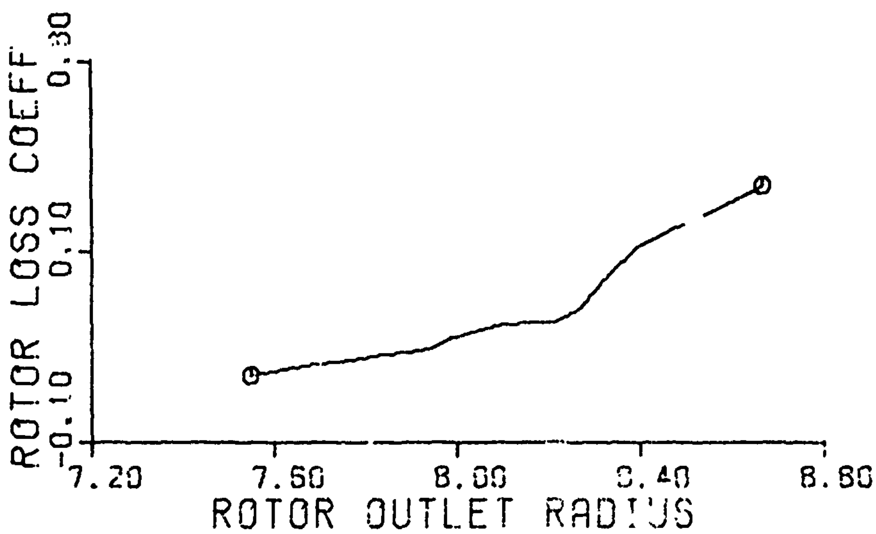


Fig. 85. Rotor Loss Coefficient vs Outlet Radius
(Within-Blade Analysis, 40% Speed)

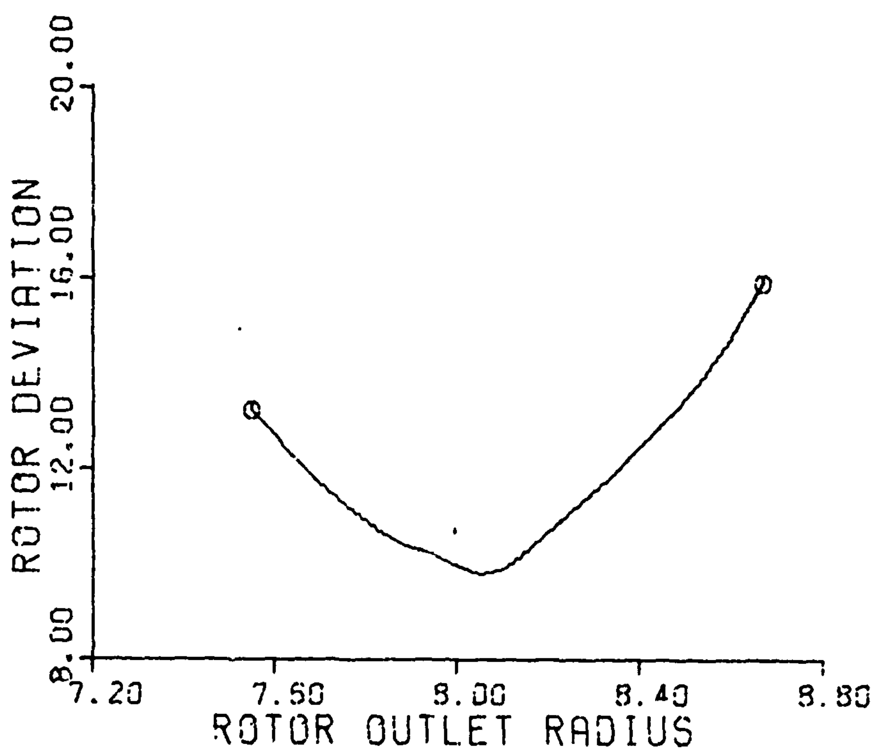


Fig. 86. Rotor Deviation vs Outlet Radius
(Within-Blade Analysis, 40% Speed)

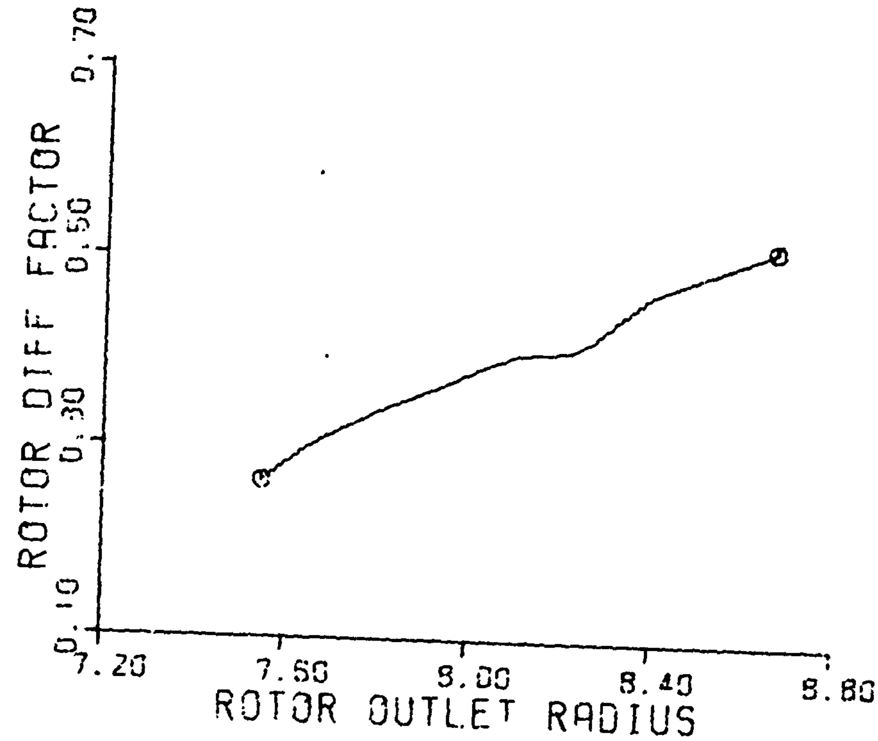


Fig. 87. Rotor Diffusion Factor vs Outlet Radius
(Within-Blade Analysis, 40% Speed)

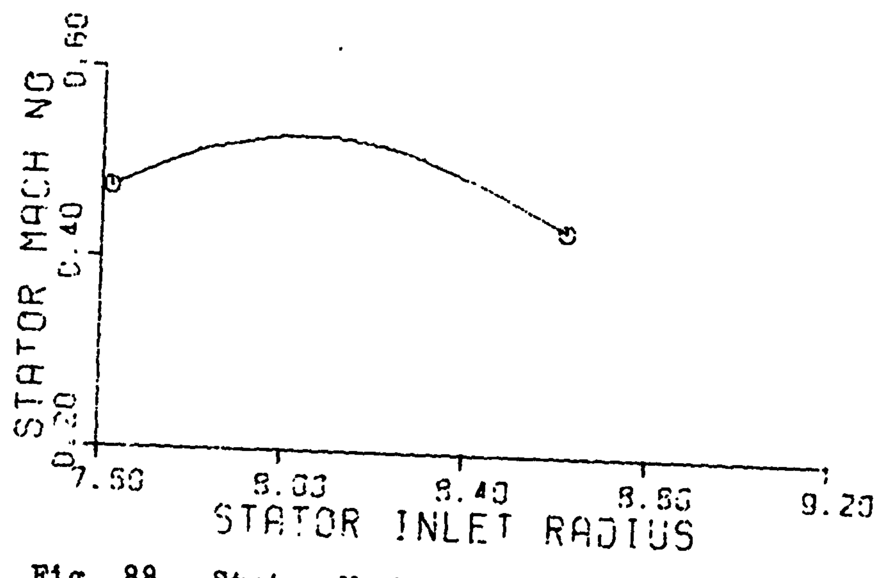


Fig. 88. Stator Mach Number vs Inlet Radius
(Within-Blade Analysis, 40% Speed)

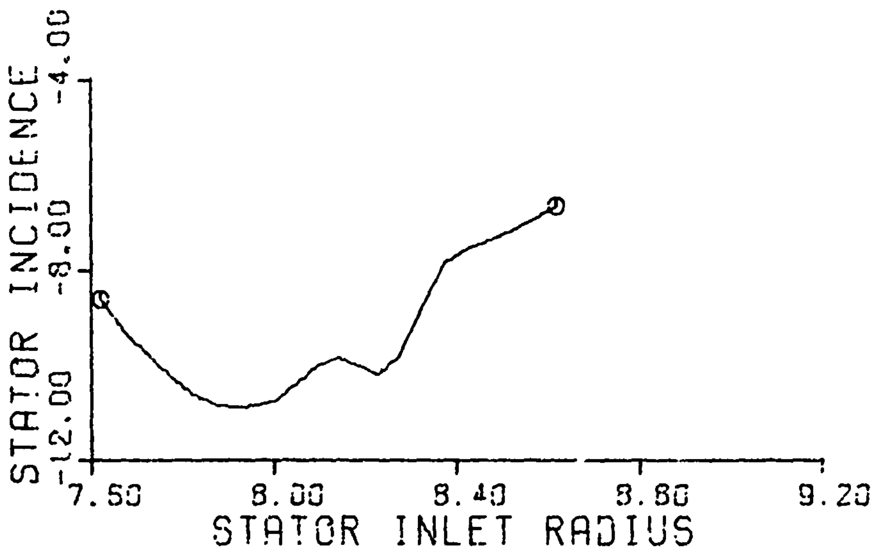


Fig. 89. Stator Incidence vs Inlet Radius
(Within-Blade Analysis, 40% Speed)

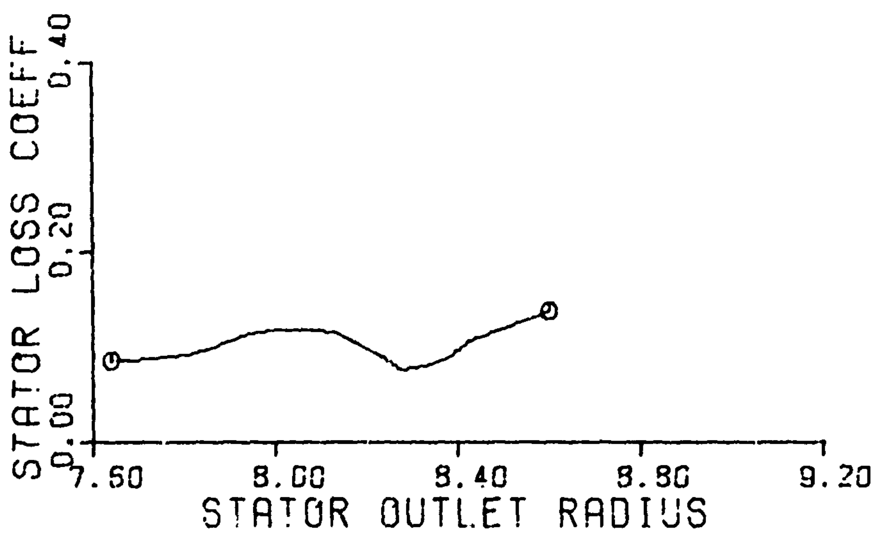


Fig. 90. Stator Loss Coefficient vs Outlet Radius
(Within-Blade Analysis, 40% Speed)

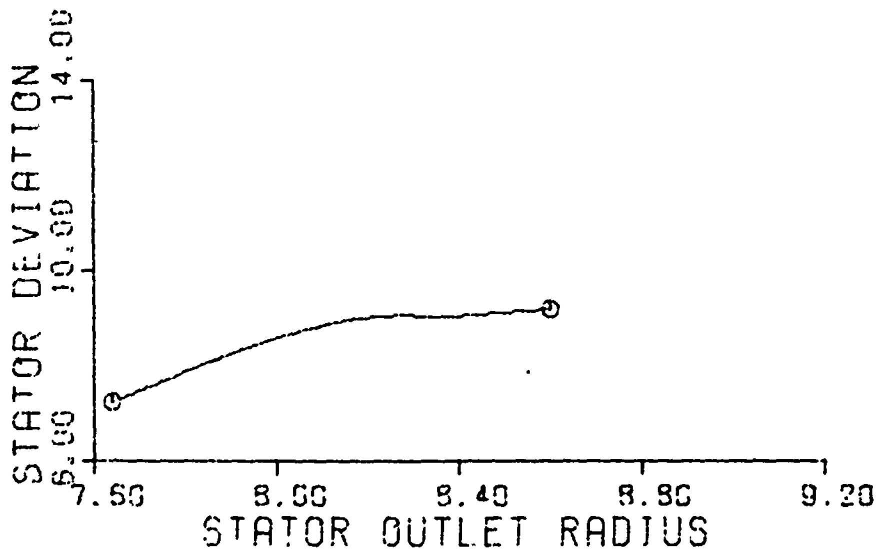


Fig. 91. Stator Deviation vs Outlet Radius (Within-Blade Analysis, 40% Speed)

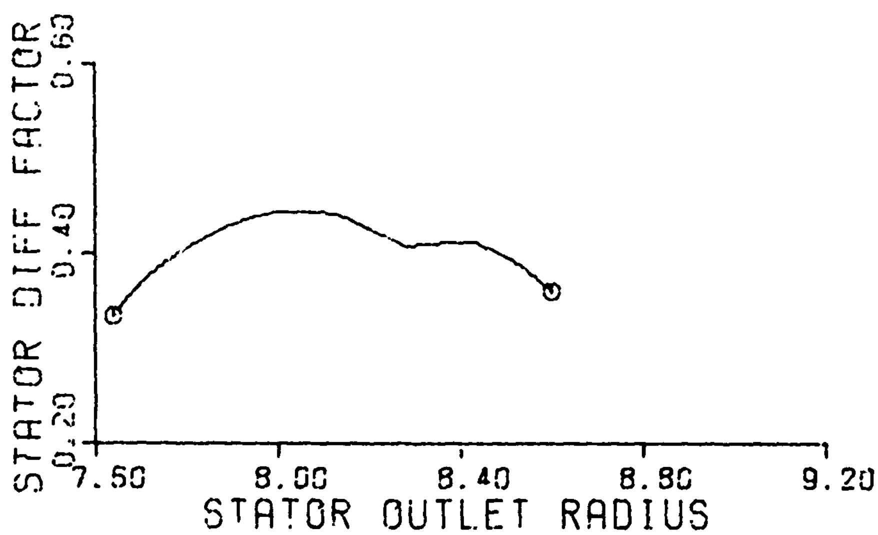


Fig. 92. Stator Diffusion Factor vs Outlet Radius (Within-Blade Analysis, 40% Speed)

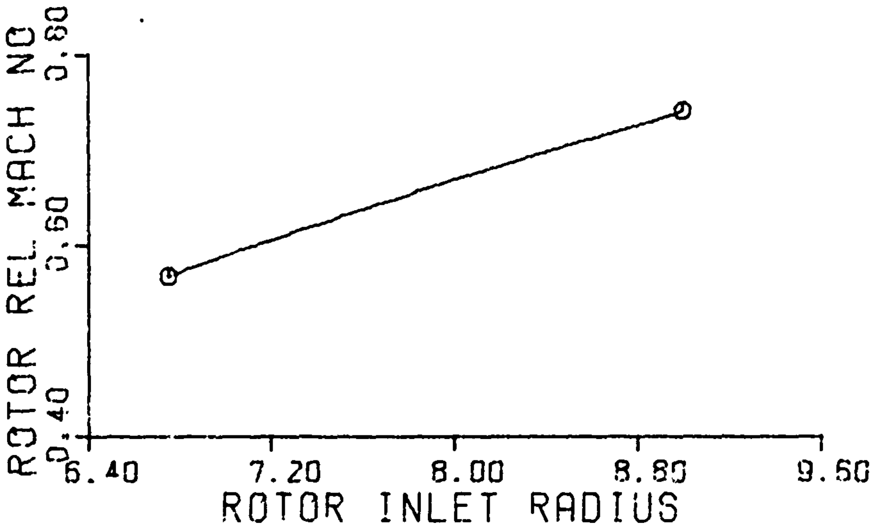


Fig. 93. Rotor Relative Mach Number vs Inlet Radius
(Within-Blade Analysis, 50% Speed)

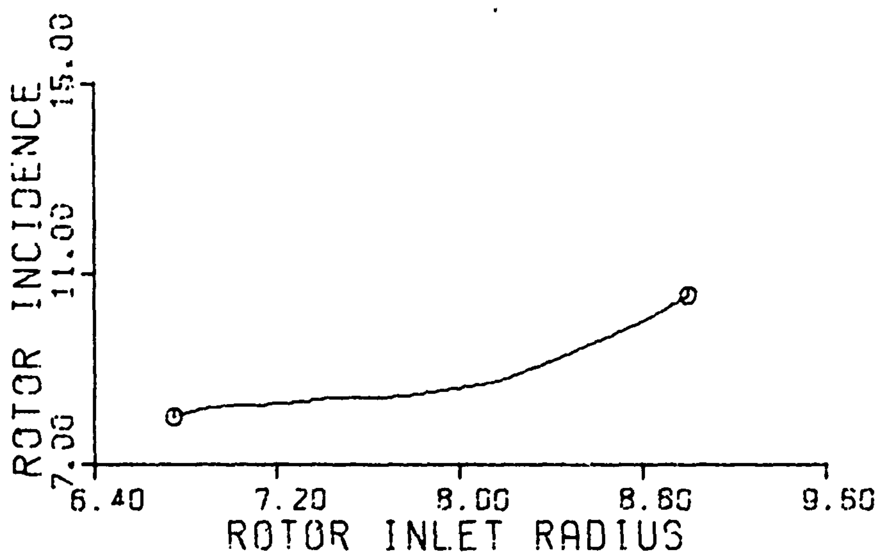


Fig. 94. Rotor Incidence vs Inlet Radius
(Within-Blade Analysis, 50% Speed)

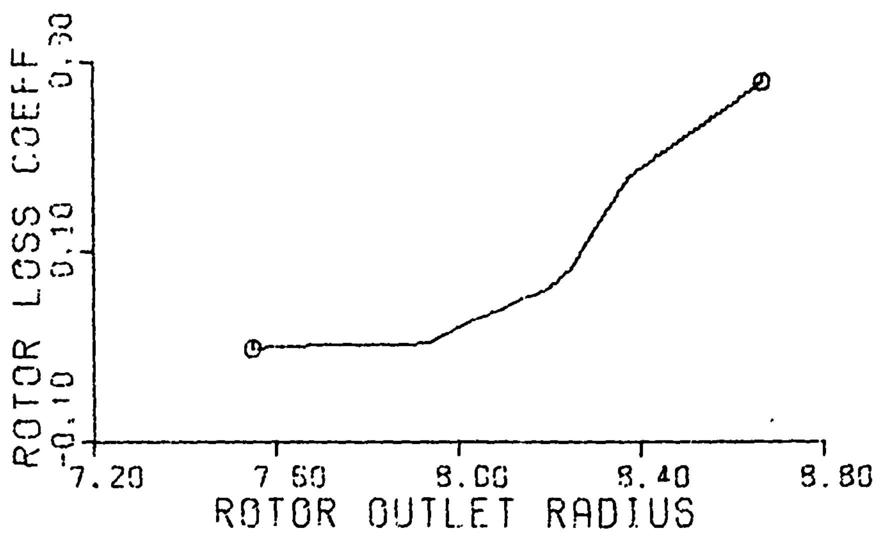


Fig. 95. Rotor Loss Coefficient vs Outlet Radius
(Within-Blade Analysis, 50% Speed)

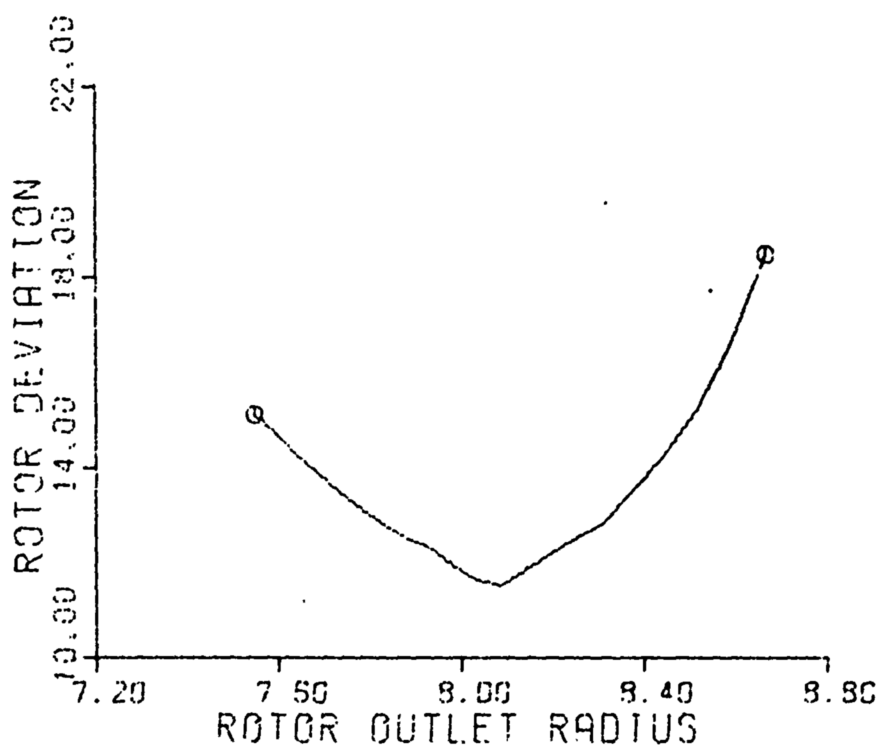


Fig. 96. Rotor Deviation vs Outlet Radius
(Within-Blade Analysis, 50% Speed)

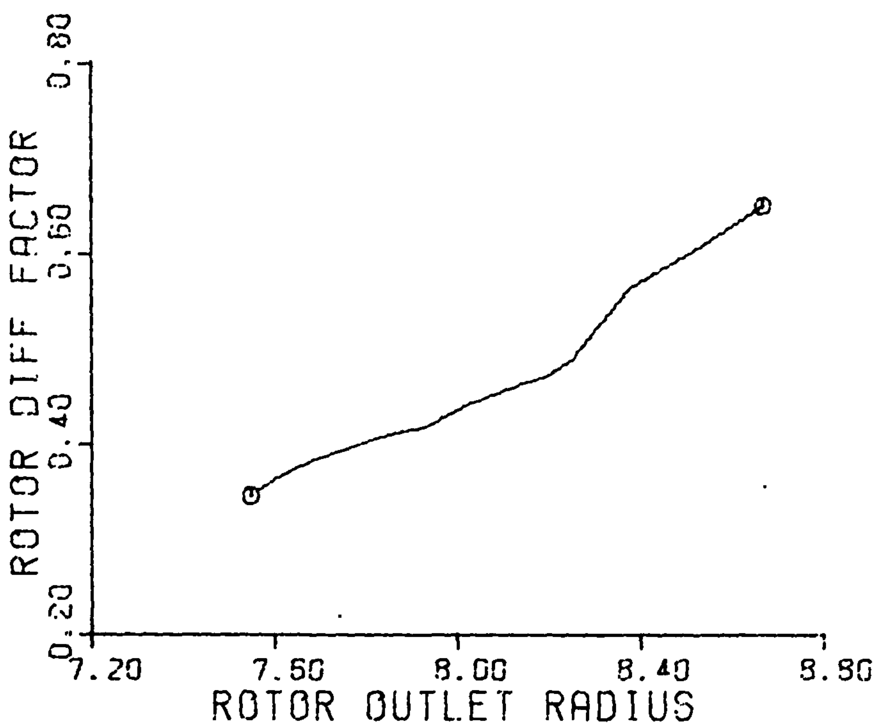


Fig. 97. Rotor Diffusion Factor vs Outlet Radius (Within-Blade Analysis, 50% Speed)

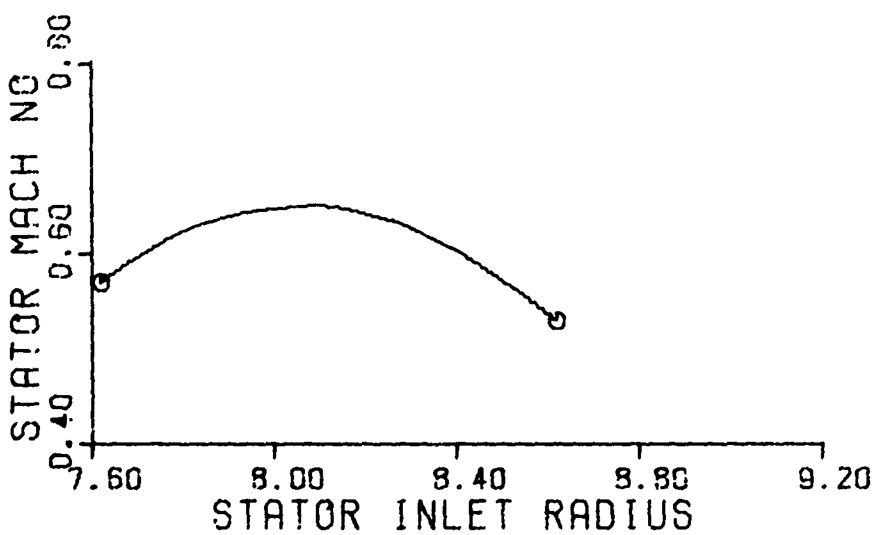


Fig. 98. Stator Mach Number vs Inlet Radius (Within-Blade Analysis, 50% Speed)

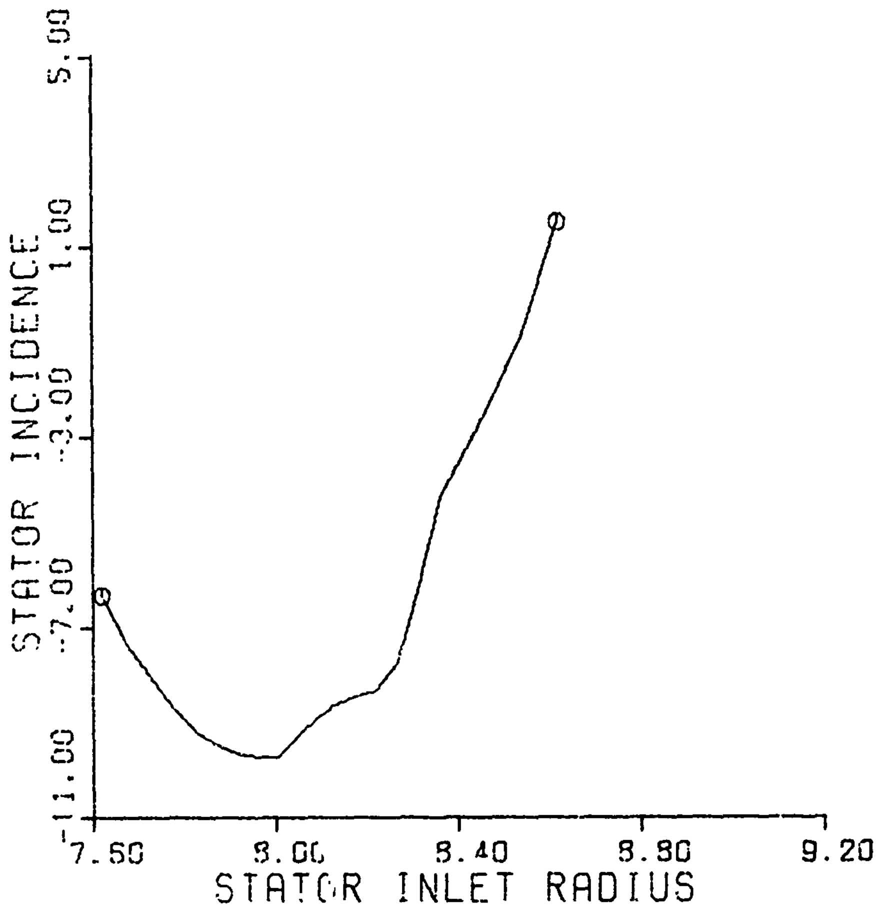


Fig. 99. Stator Incidence vs Inlet Radius
(Within-Blade Analysis, 50% Speed)

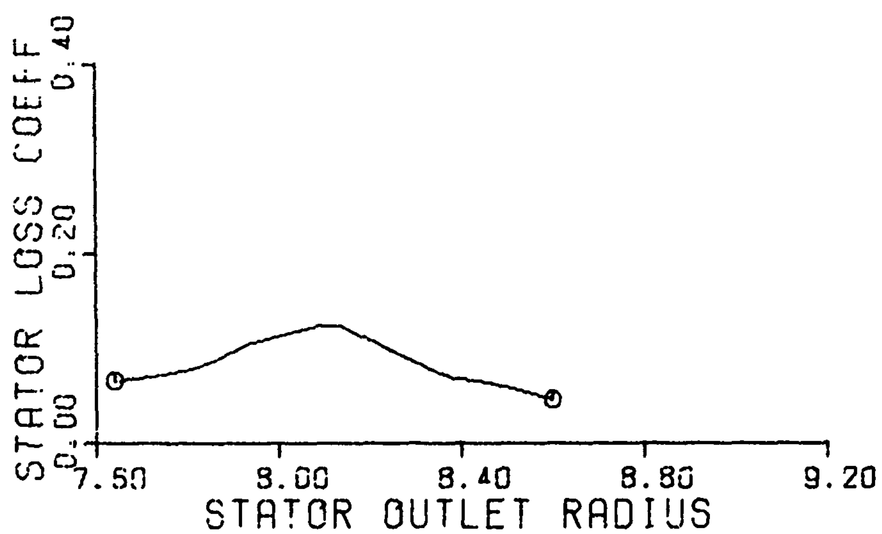


Fig. 100. Stator Loss Coefficient vs Outlet Radius
(Within-Blade Analysis, 50% Speed)

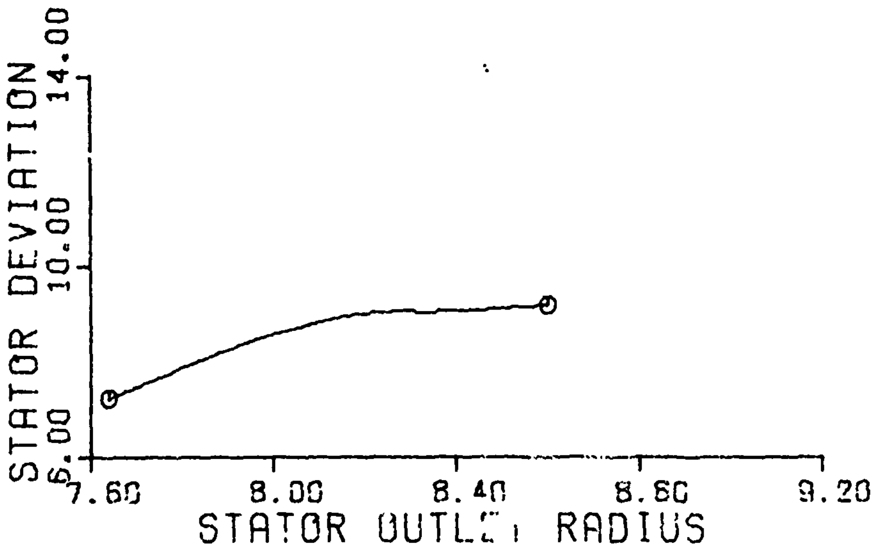


Fig. 101. Stator Deviation vs Outlet Radius
(Within-Blade Analysis, 50% Speed)

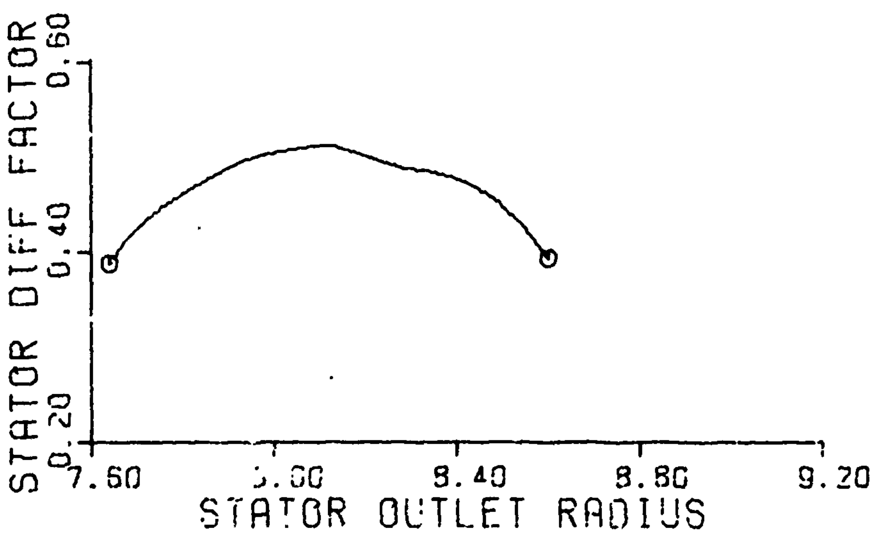


Fig. 102. Stator Diffusion Factor vs Outlet Radius
(Within-Blade Analysis, 50% Speed)

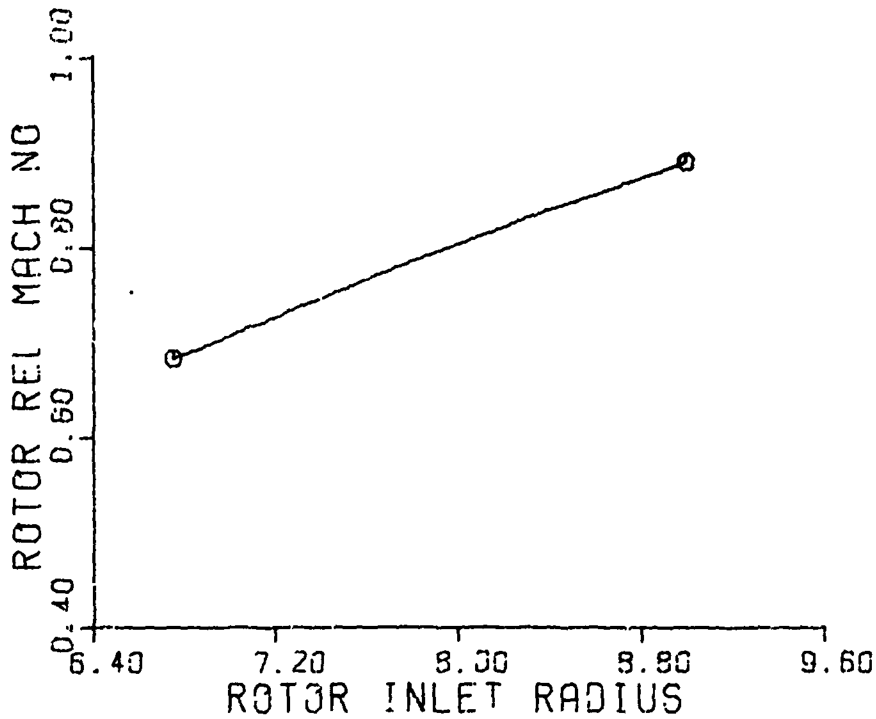


Fig. 103. Rotor Relative Mach Number vs Inlet Radius
(Within-Blade Analysis, 60% Speed)

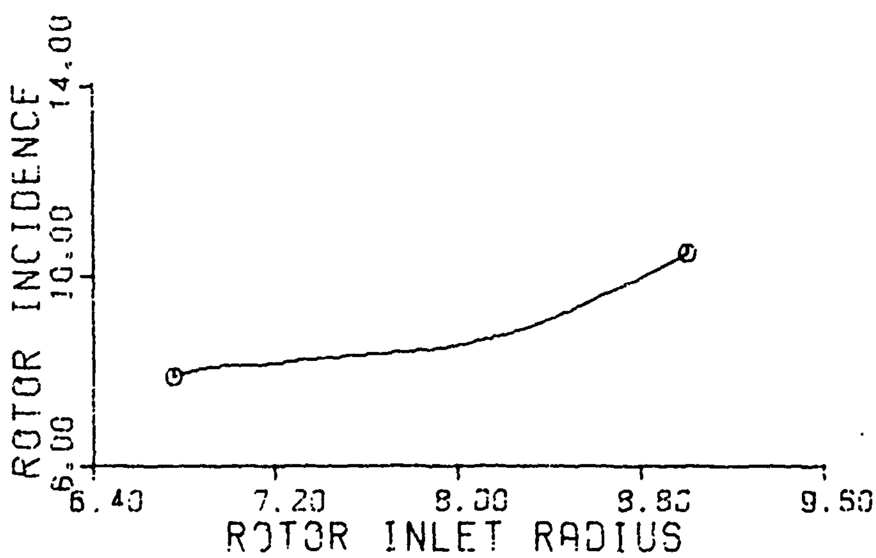


Fig. 104. Rotor Incidence vs Inlet Radius
(Within-Blade Analysis, 60% Speed)

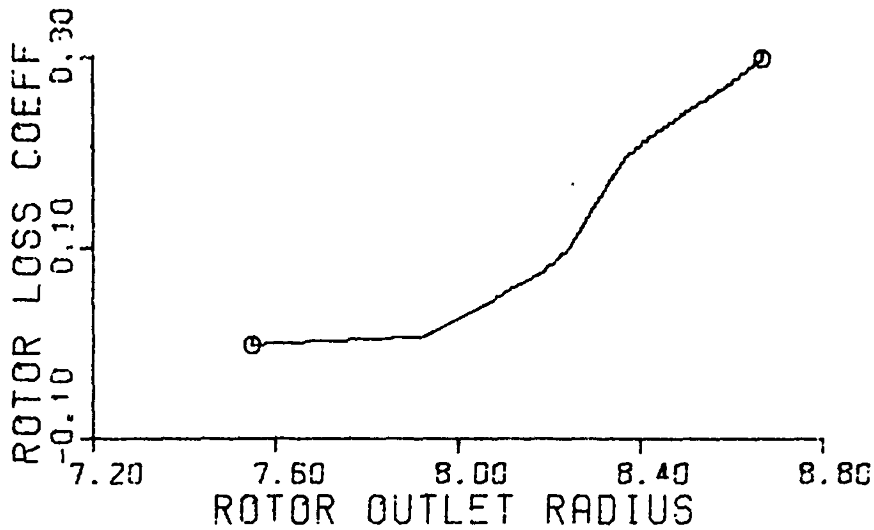


Fig. 105. Rotor Loss Coefficient vs Outlet Radius
(Within-Blade Analysis, 60% Speed)

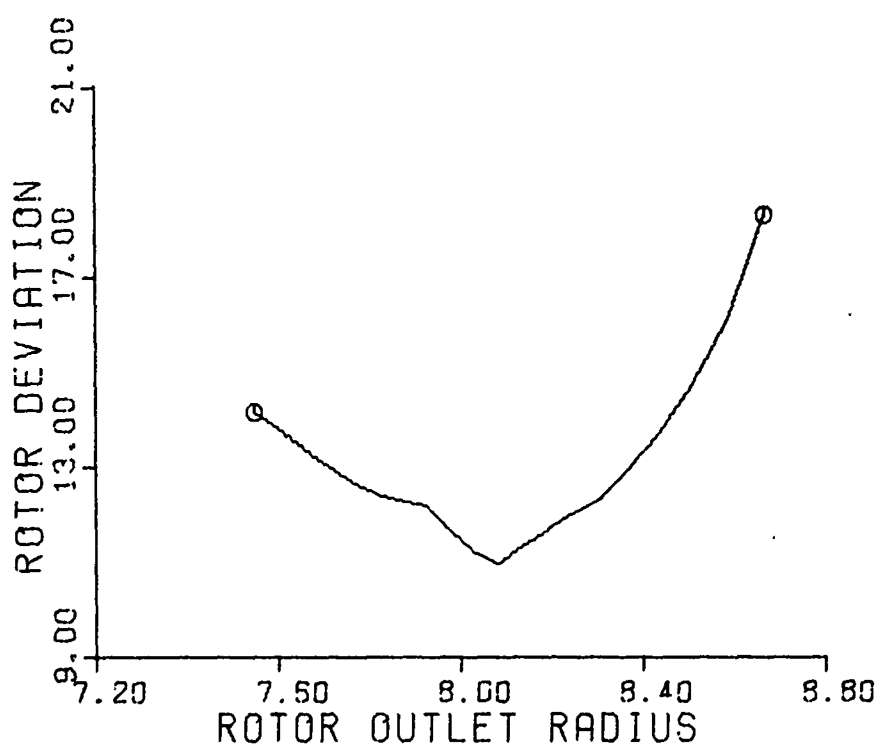


Fig. 106. Rotor Deviation vs Outlet Radius
(Within-Blade Analysis, 60% Speed)

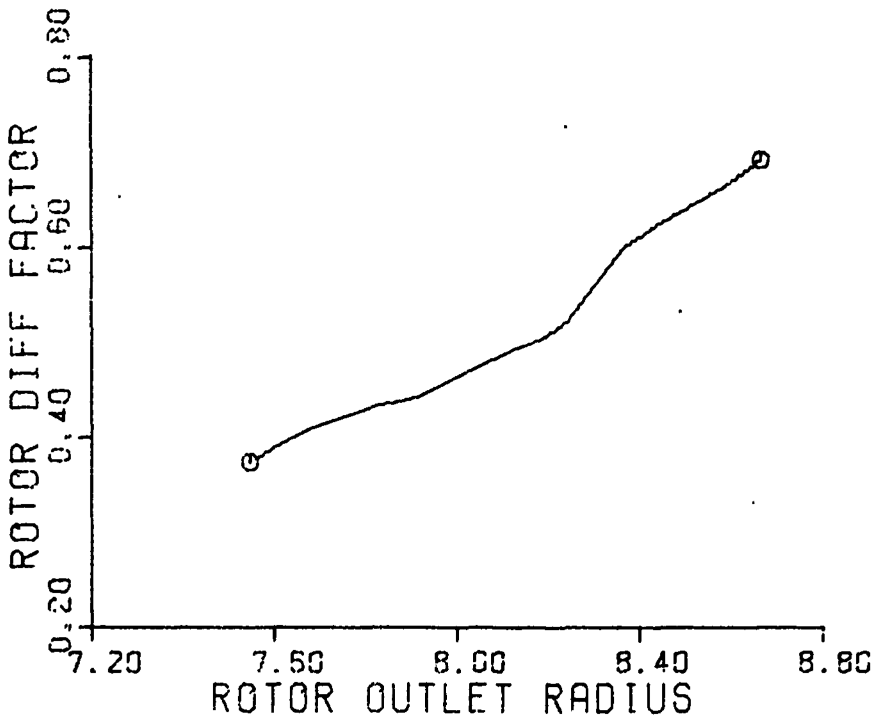


Fig. 107. Rotor Diffusion Factor vs Outlet Radius (Within-Blade Analysis, 60% Speed)

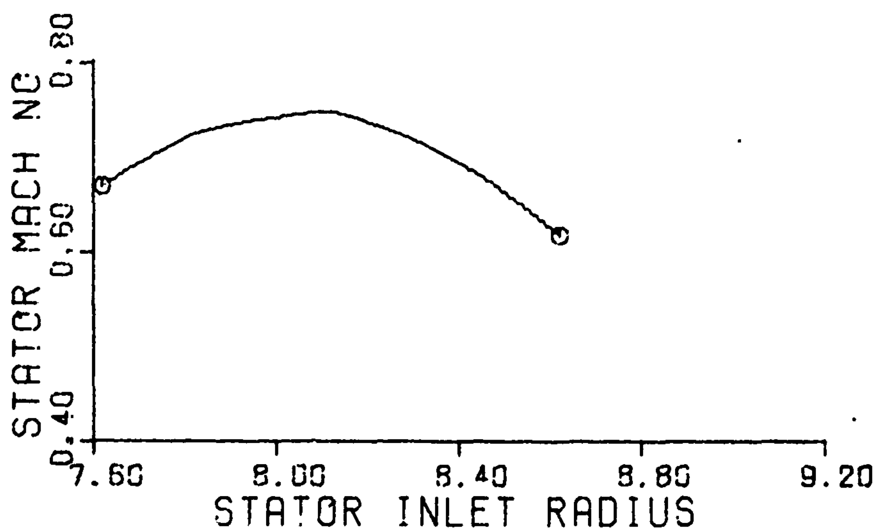


Fig. 108. Stator Mach Number vs Inlet Radius (Within-Blade Analysis, 60% Speed)

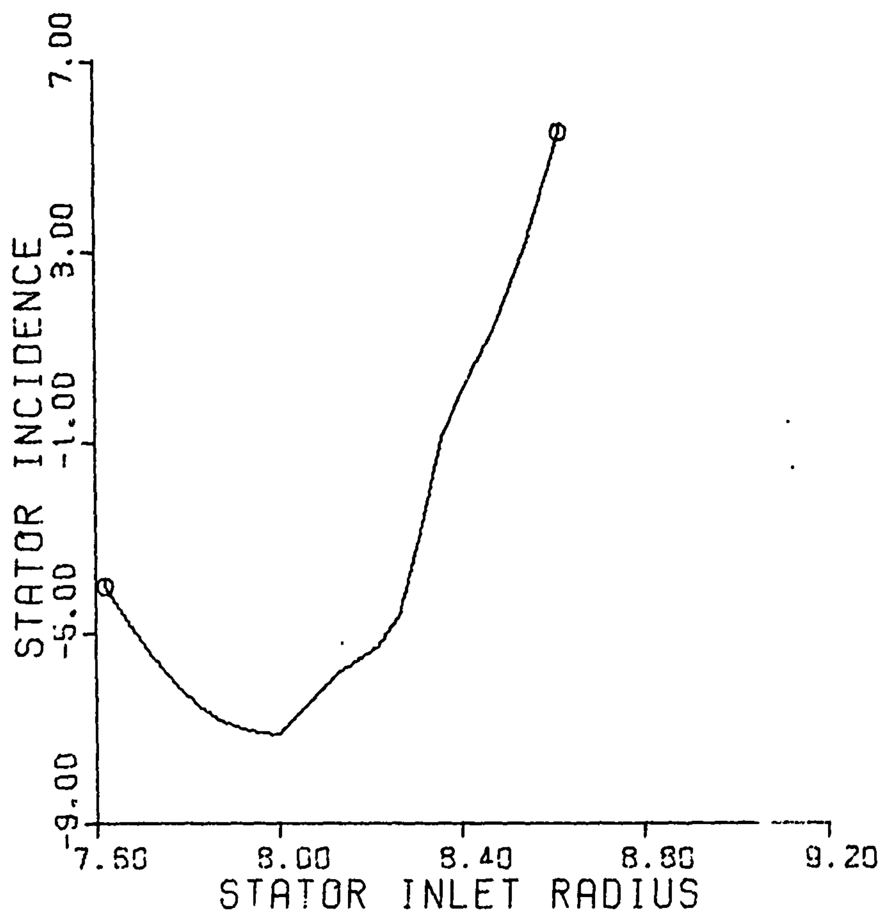


Fig. 109. Stator Incidence vs Inlet Radius
(Within-Blade Analysis, 60% Speed)

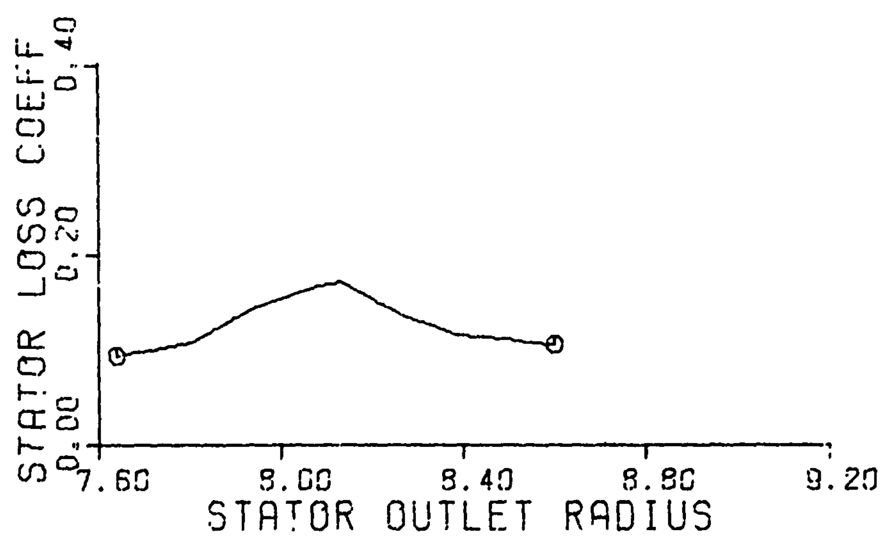


Fig. 110. Stator Loss Coefficient vs Outlet Radius
(Within-Blade Analysis, 60% Speed)

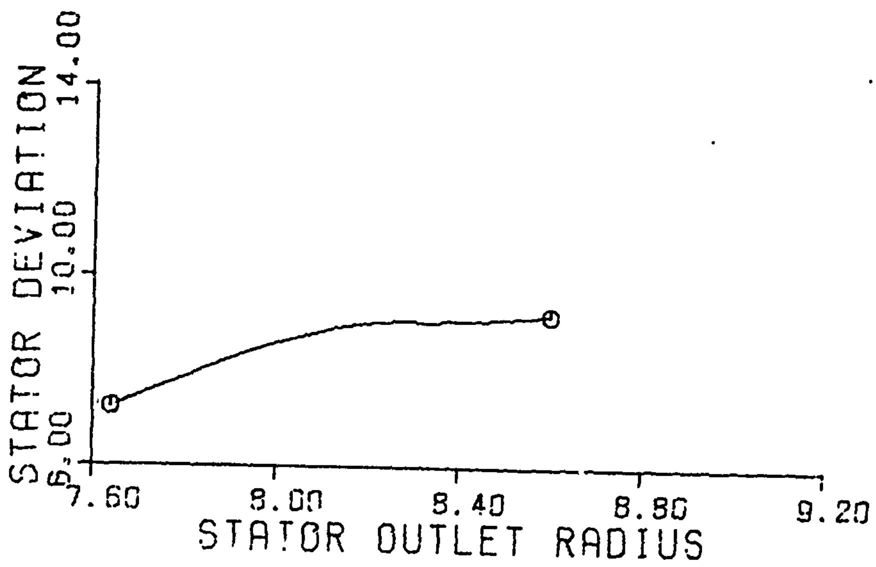


Fig. 111. Stator Deviation vs Outlet Radius (Within-Blade Analysis, 60% Speed)

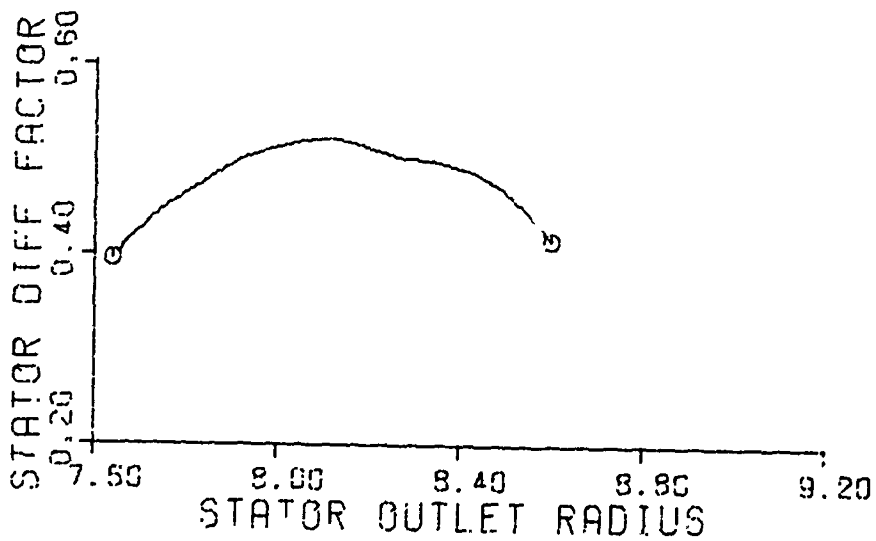


Fig. 112. Stator Diffusion Factor vs Outlet Radius (Within-Blade Analysis, 60% Speed)

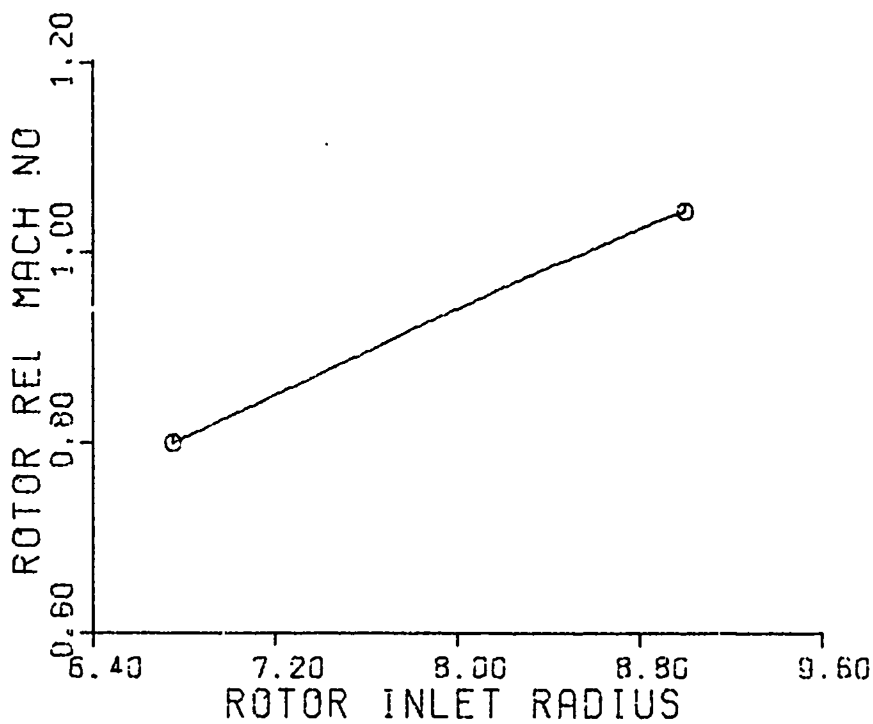


Fig. 113. Rotor Relative Mach Number vs Inlet Radius
(Within-Blade Analysis, 70% Speed)

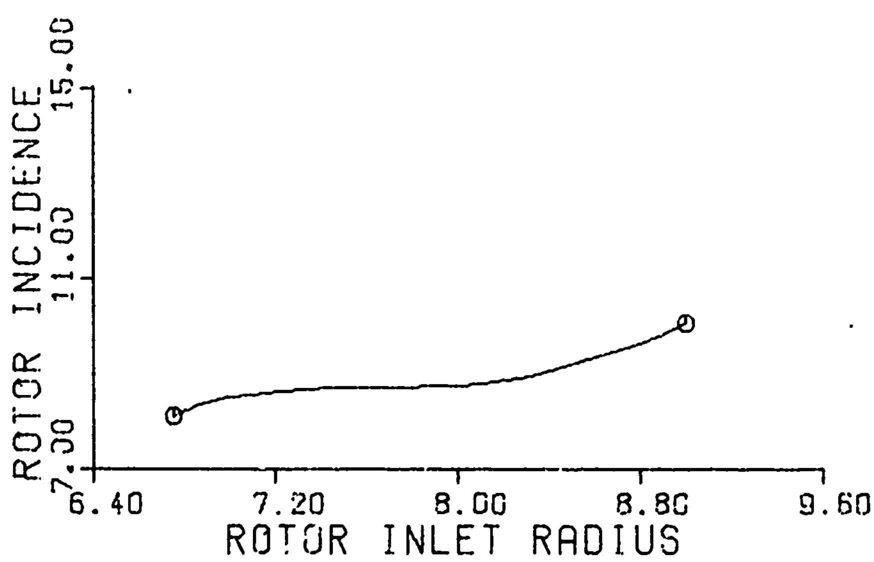


Fig. 114. Rotor Incidence vs Inlet Radius
(Within-Blade Analysis, 70% Speed)

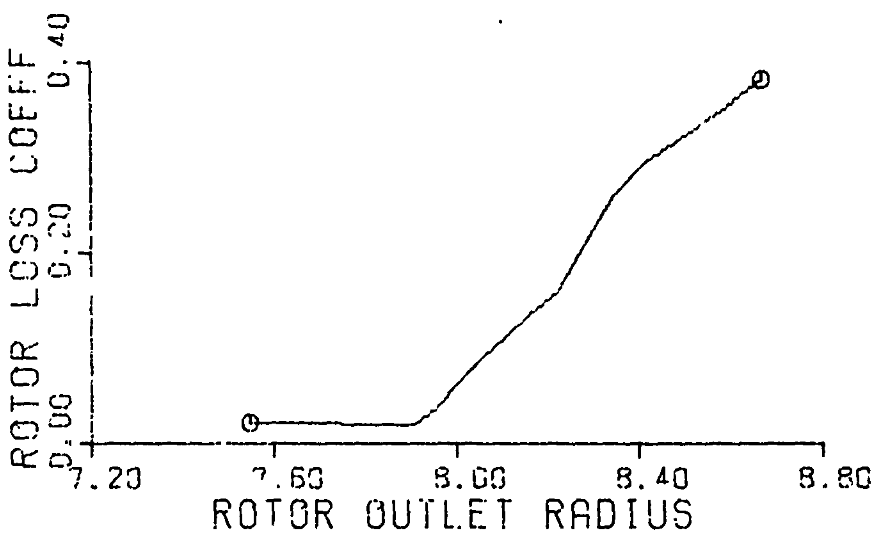


Fig. 115. Rotor Loss Coefficient vs Outlet Radius
(Within-Blade Analysis, 70% Speed)

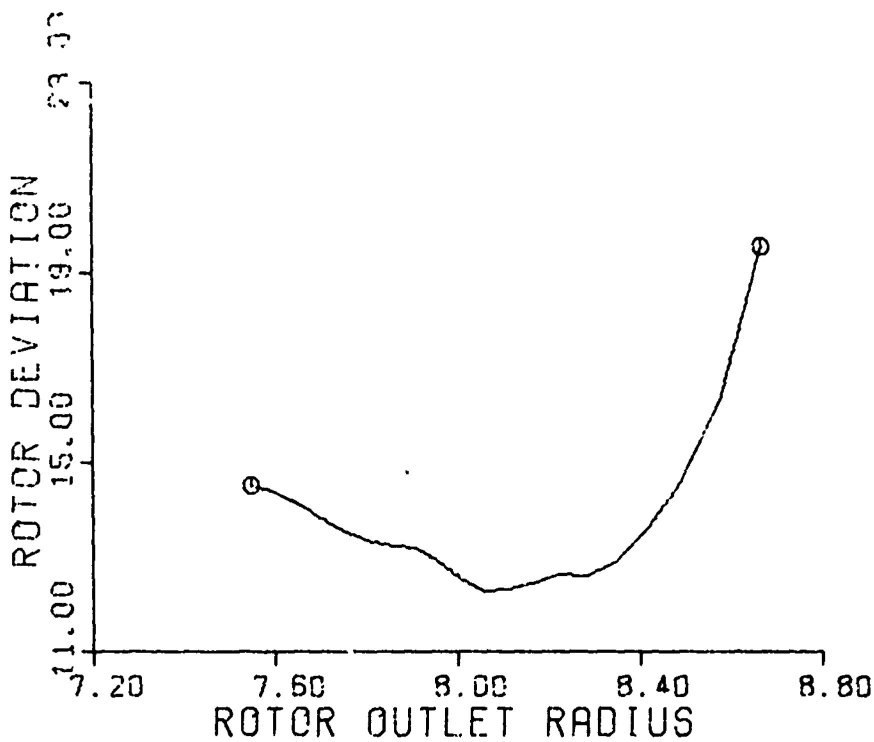


Fig. 116. Rotor Deviation vs Outlet Radius
(Within-Blade Analysis, 70% Speed)

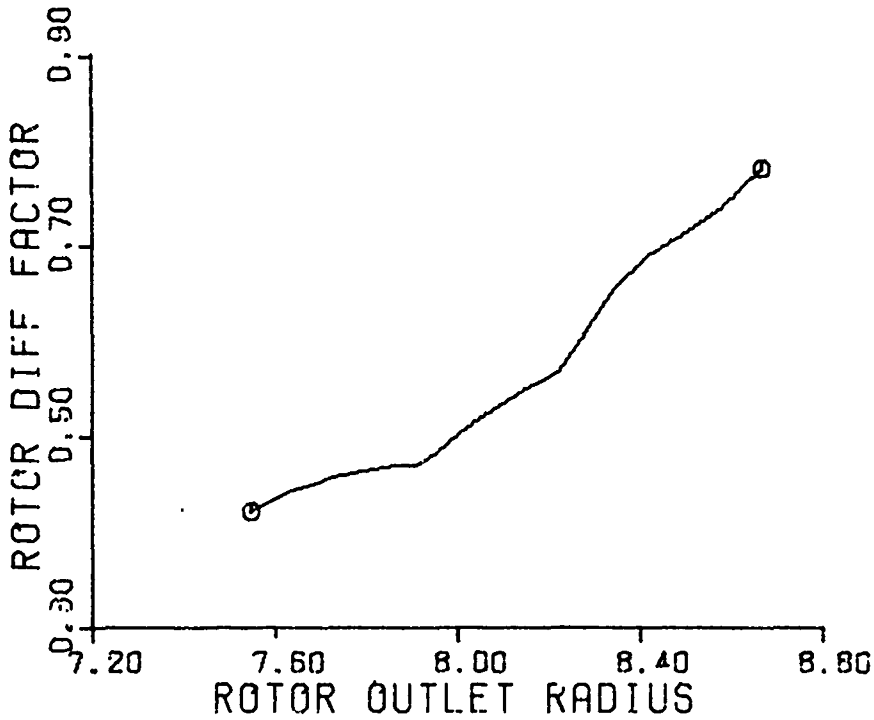


Fig. 117. Rotor Diffusion Factor vs Outlet Radius
(Within-Blade Analysis, 70% Speed)

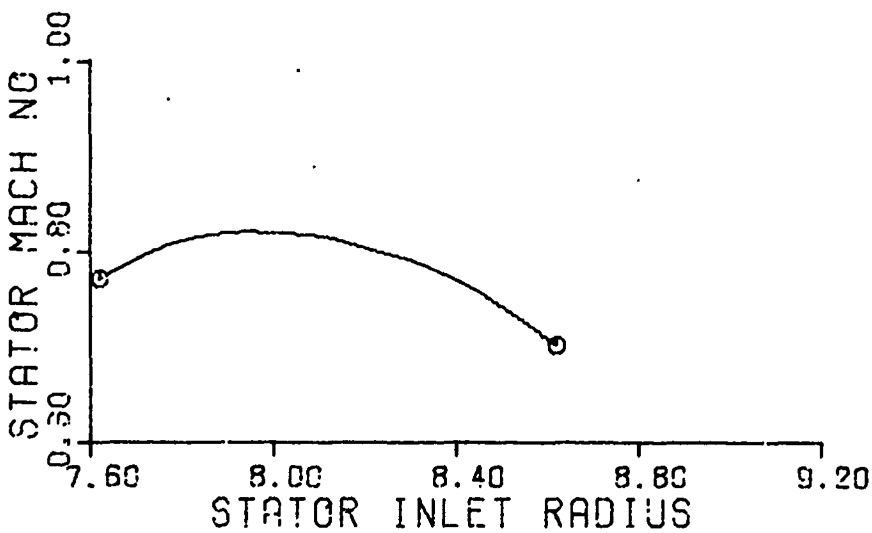


Fig. 118. Stator Mach Number vs Inlet Radius
(Within-Blade Analysis, 70% Speed)

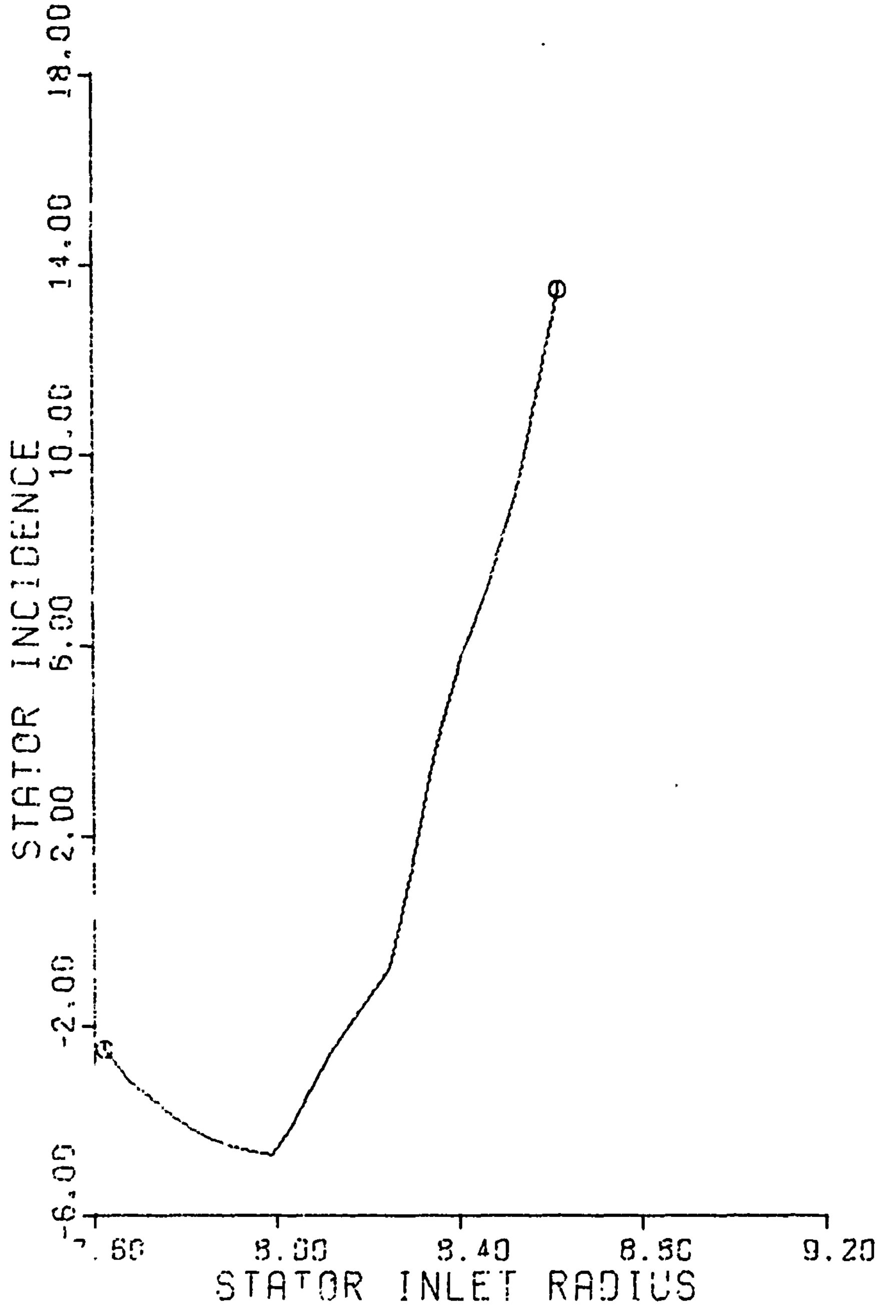


Fig. 119. Stator Incidence vs Inlet Radius
(Within-Blade Analysis, 70% Speed)

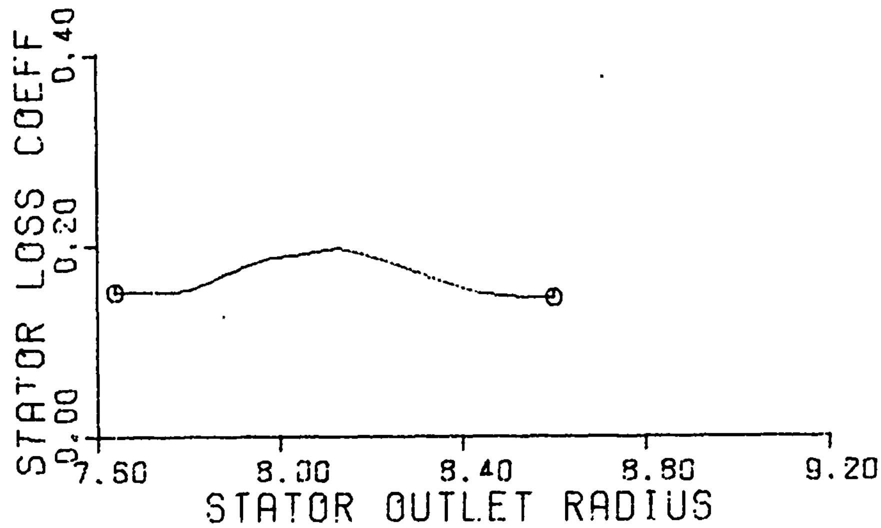


Fig. 120. Stator Loss Coefficient vs Outlet Radius
(Within-Blade Analysis, 70% Speed)

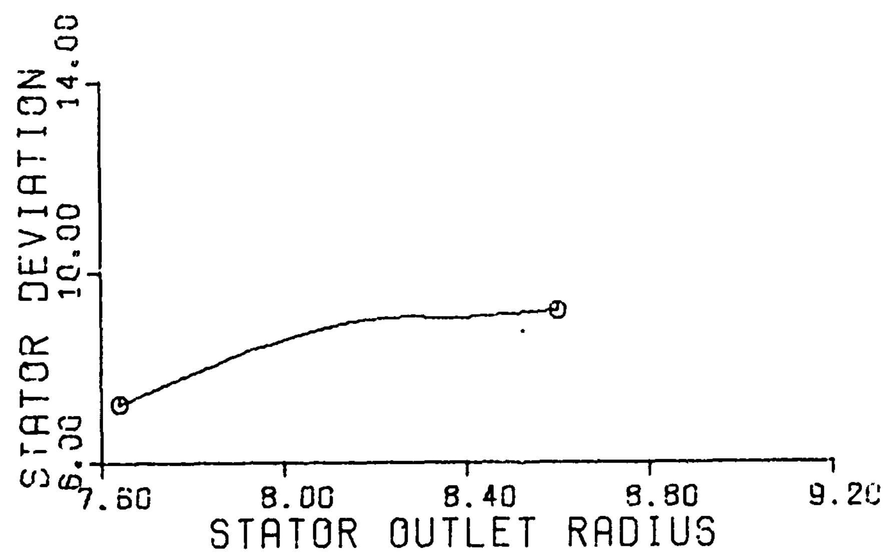


Fig. 121. Stator Deviation vs Outlet Radius
(Within-Blade Analysis, 70% Speed)

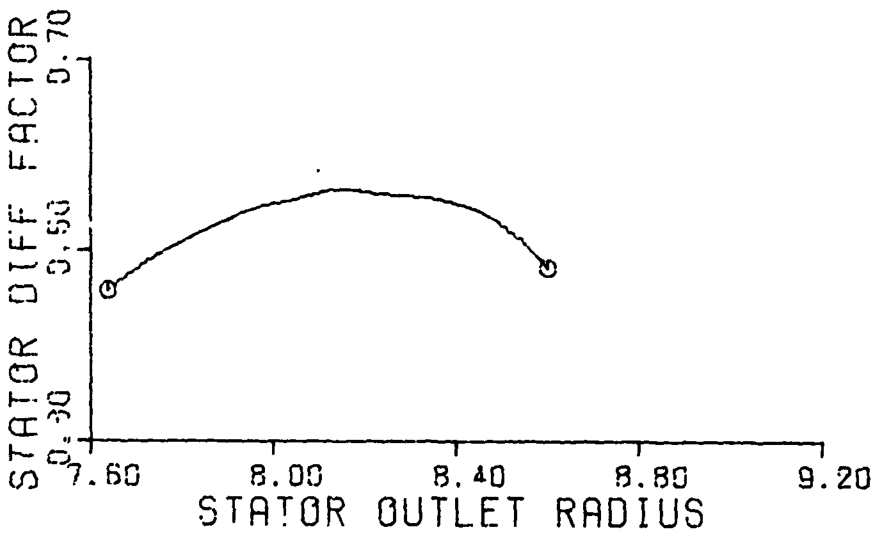


Fig. 122. Stator Diffusion Factor vs Outlet Radius
(Within-Blade Analysis, 70% Speed)

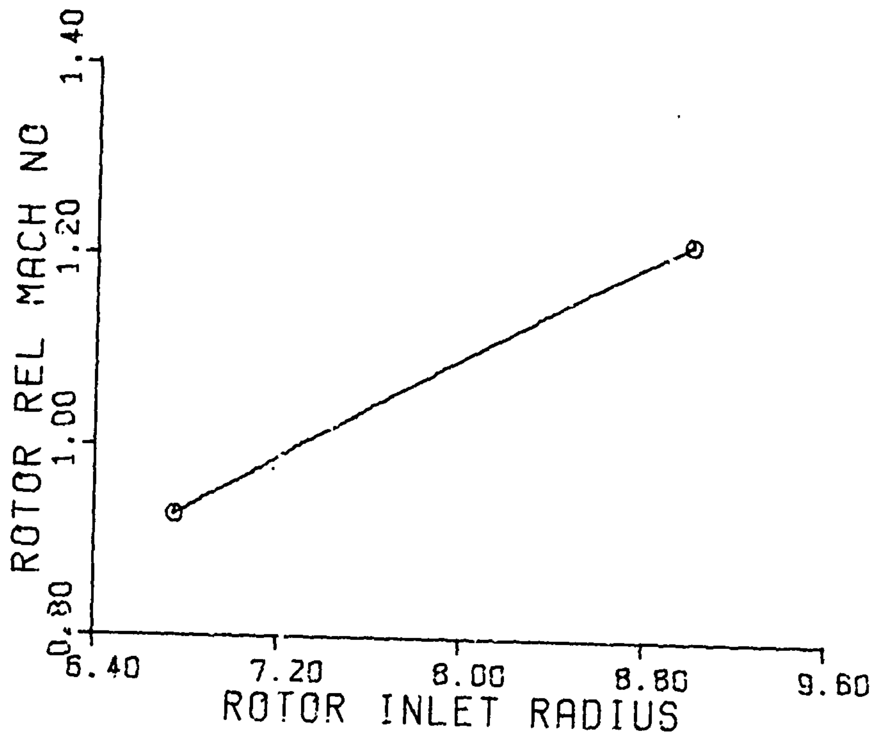


Fig. 123. Rotor Relative Mach Number vs Inlet Radius (Within-Blade Analysis, 82% Speed)

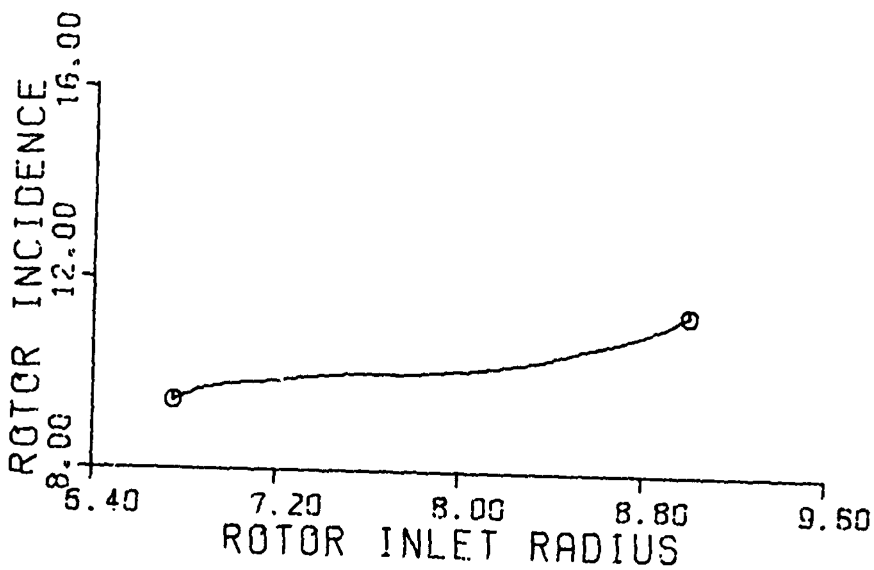


Fig. 124. Rotor Incidence vs Inlet Radius (Within-Blade Analysis, 82% Speed)

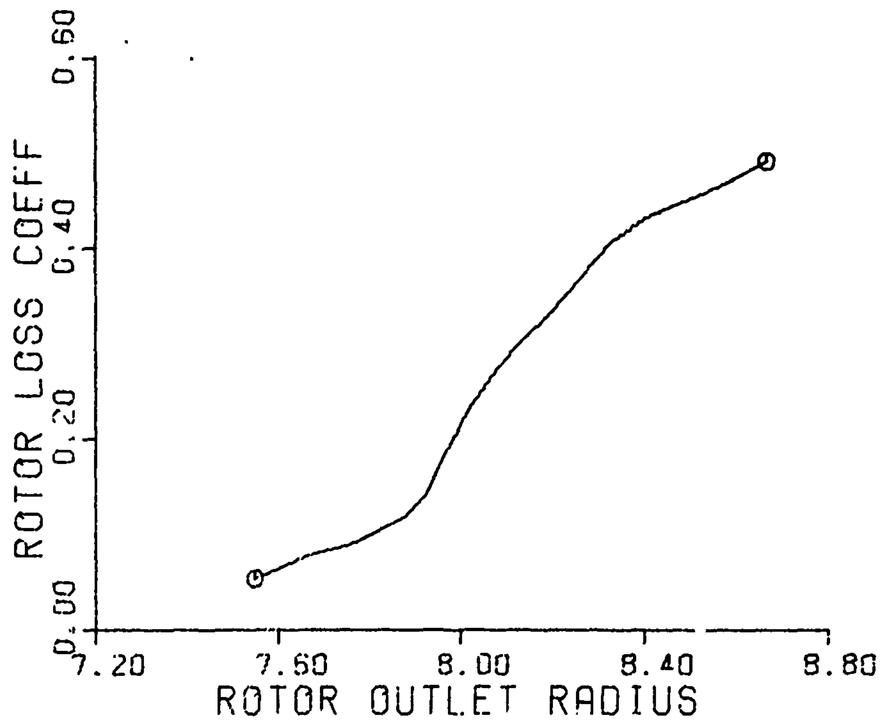


Fig. 125. Rotor Loss Coefficient vs Outlet Radius
(Within-Blade Analysis, 82% Speed)

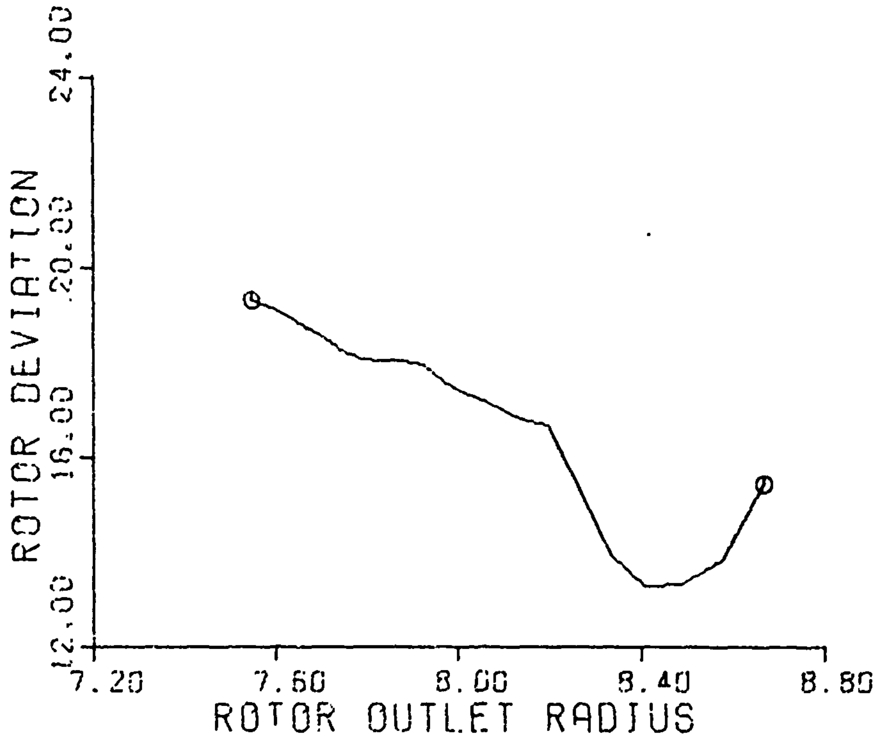


Fig. 126. Rotor Deviation vs Outlet Radius
(Within-Blade Analysis, 82% Speed)

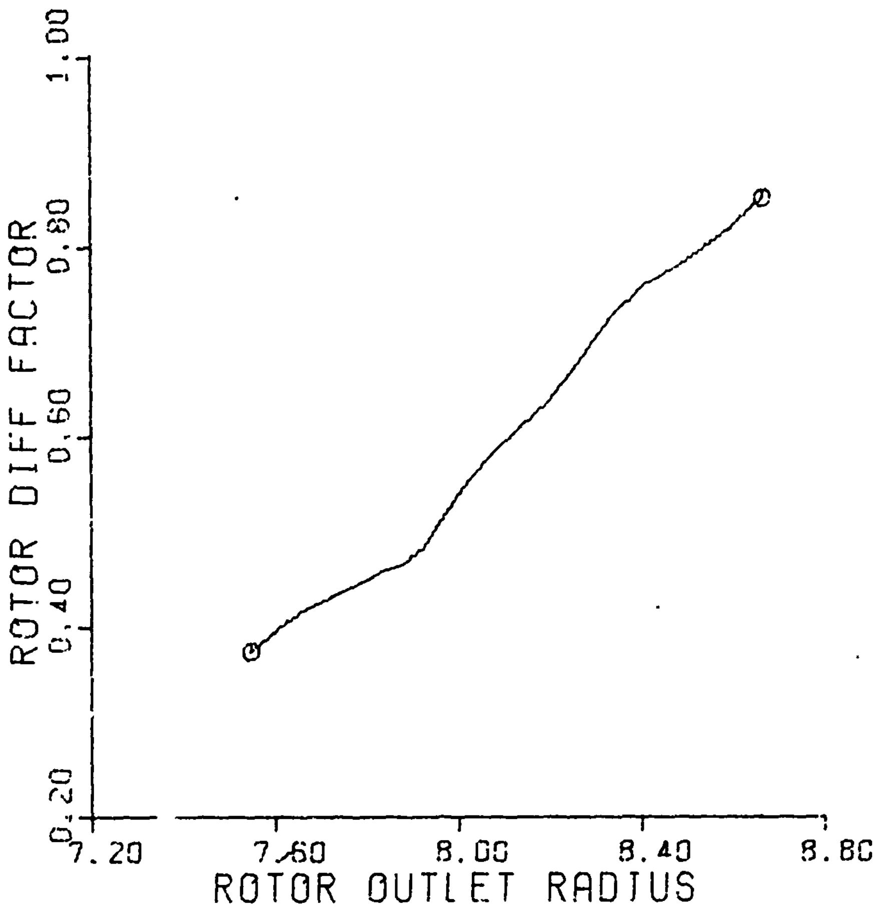


Fig. 127. Rotor Diffusion Factor vs Outlet Radius
(Within-Blade Analysis, 82% Speed)

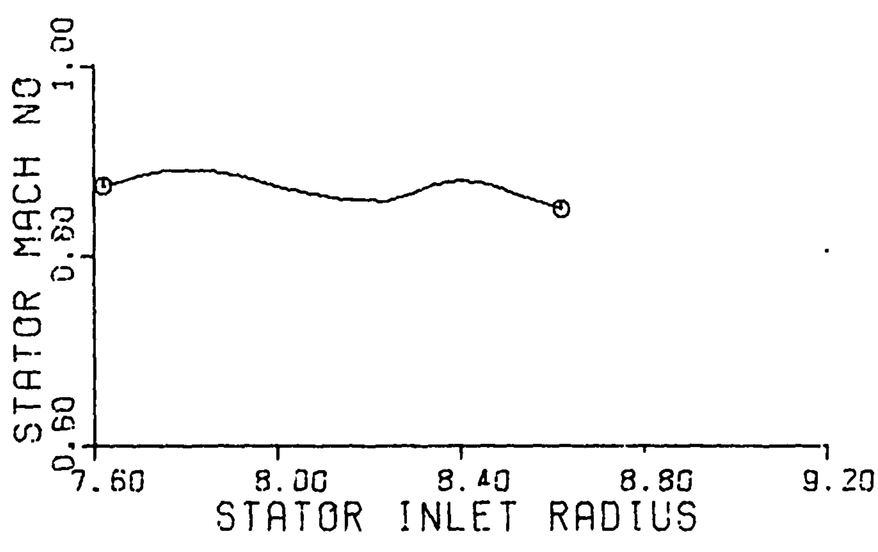


Fig. 128. Stator Mach Number vs Inlet Radius
(Within-Blade Analysis, 82% Speed)

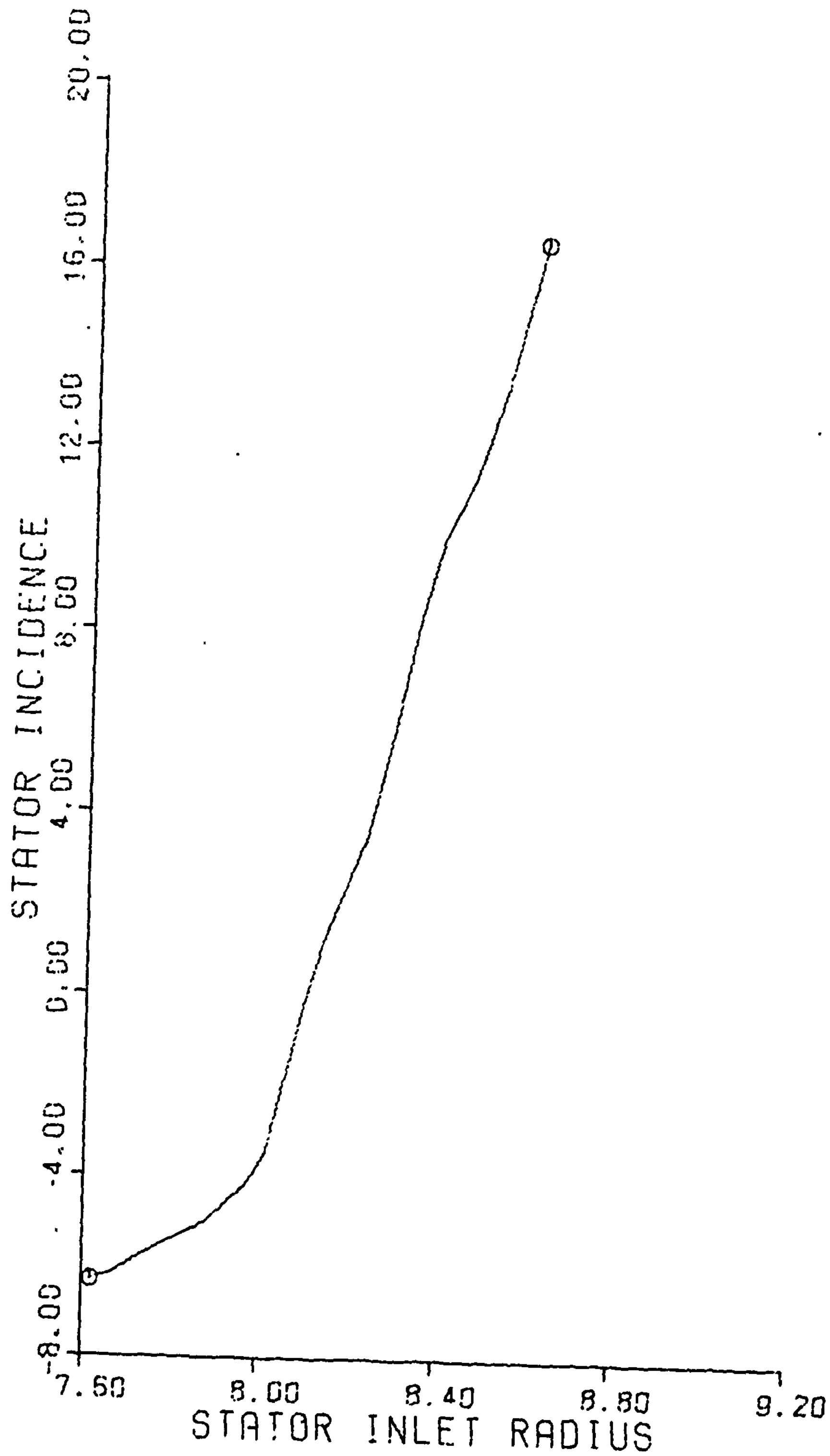


Fig. 129. Stator Incidence vs Inlet Radius (Within-Blade Analysis, 82% Speed)

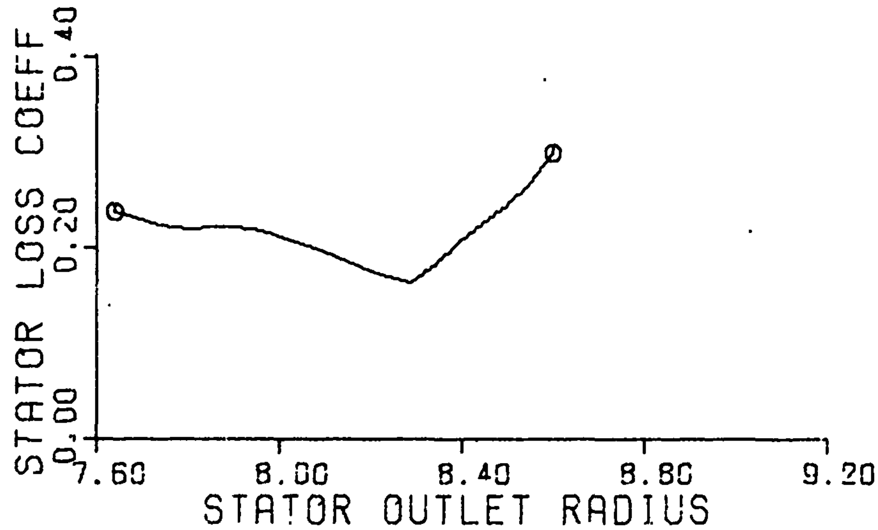


Fig. 130. Stator Loss Coefficient vs Outlet Radius
(Within-Blade Analysis, 82% Speed)

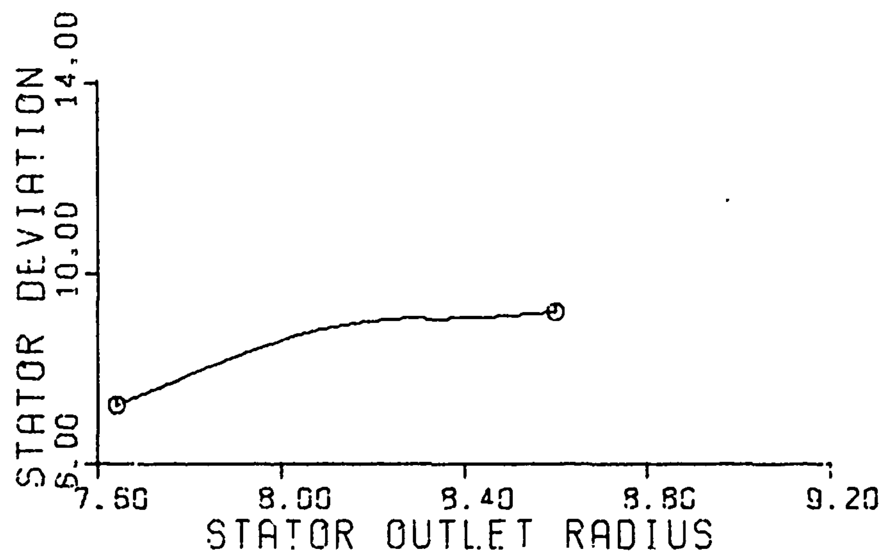


Fig. 131. Stator Deviation vs Outlet Radius
(Within-Blade Analysis, 82% Speed)

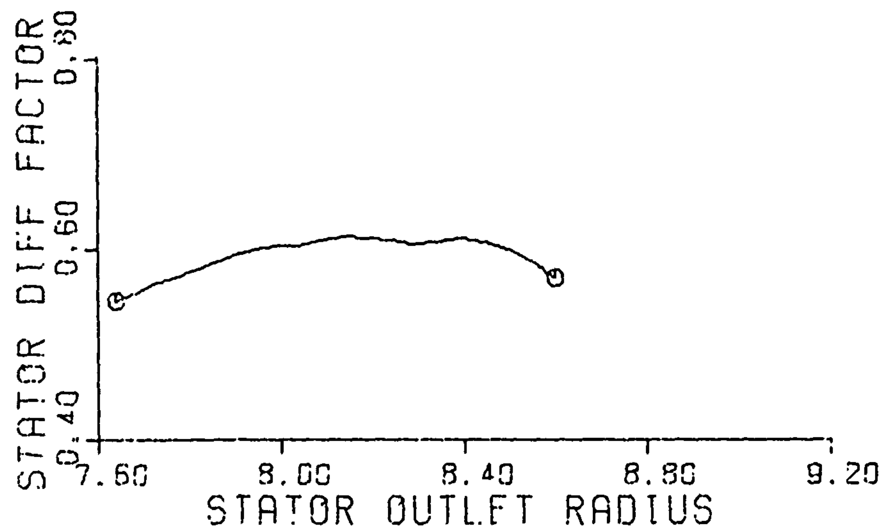


Fig. 132. Stator Diffusion Factor vs Outlet Radius (Within-Blade Analysis, 82% Speed)

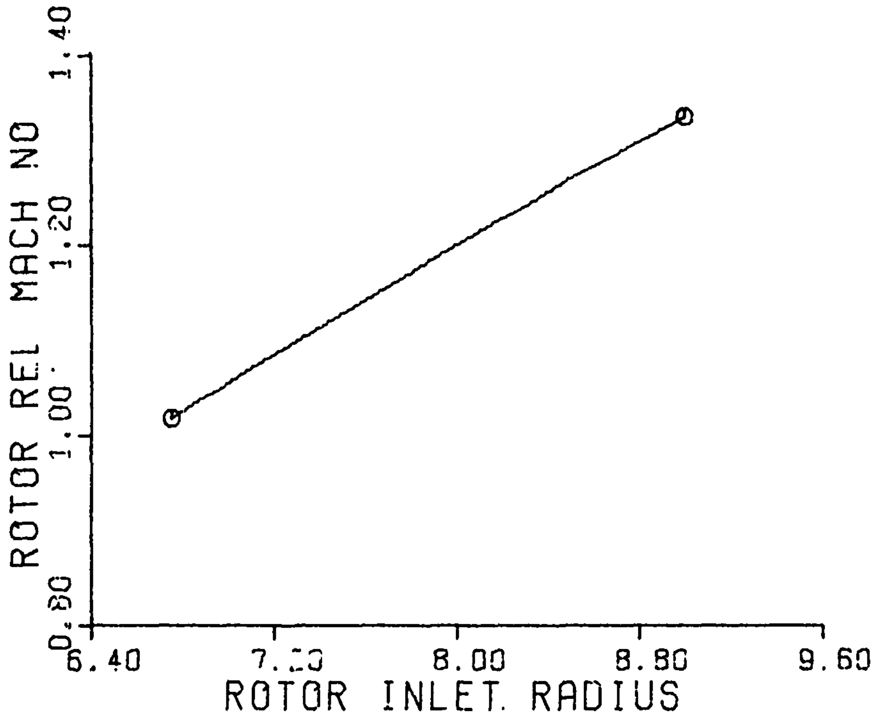


Fig. 133. Rotor Relative Mach Number vs Inlet Radius
(Within-Blade Analysis, 90% Speed)

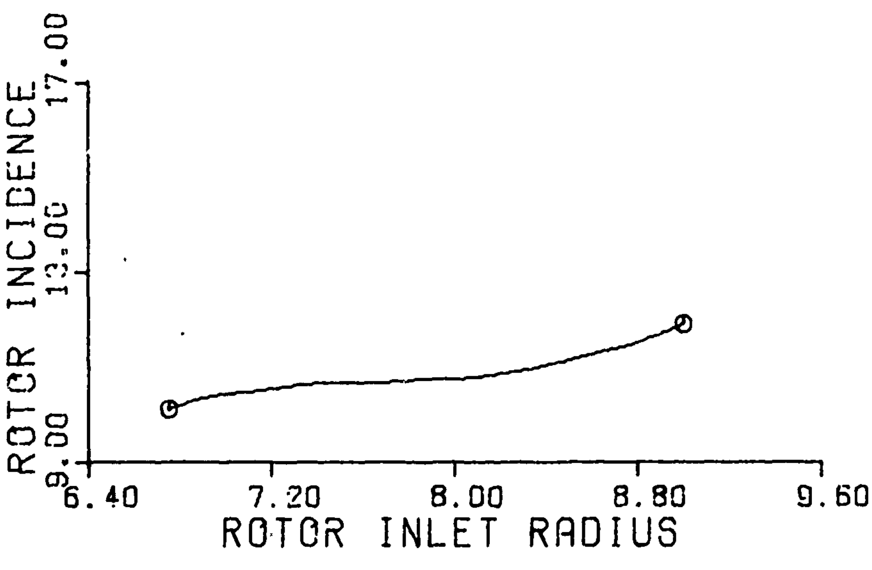


Fig. 134. Rotor Incidence vs Inlet Radius
(Within-Blade Analysis, 90% Speed)

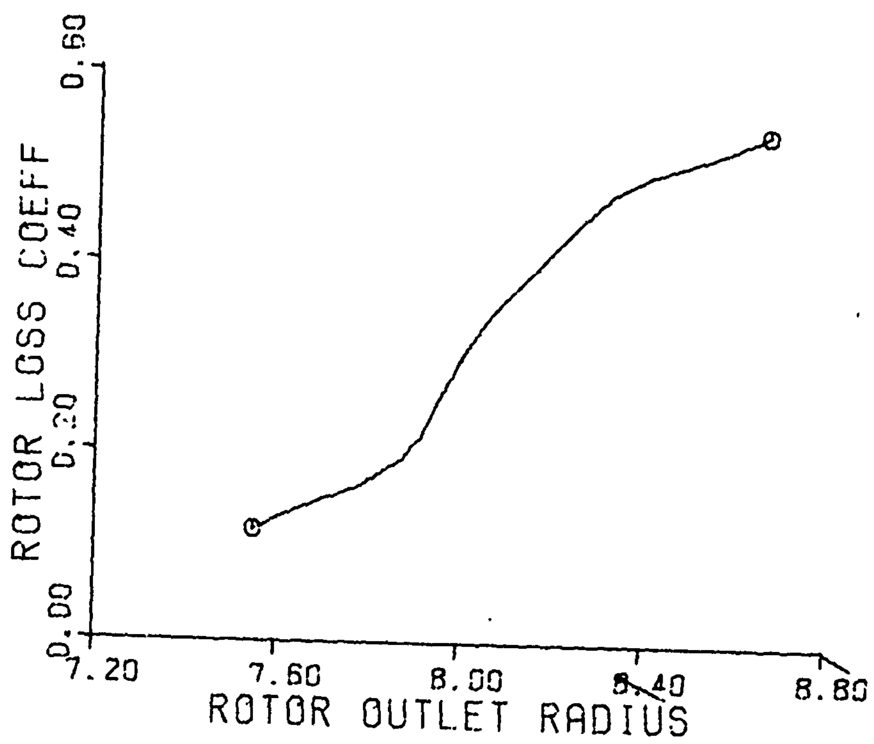


Fig. 135. Rotor Loss Coefficient vs Outlet Radius (Within-Blade Analysis, 90% Speed)

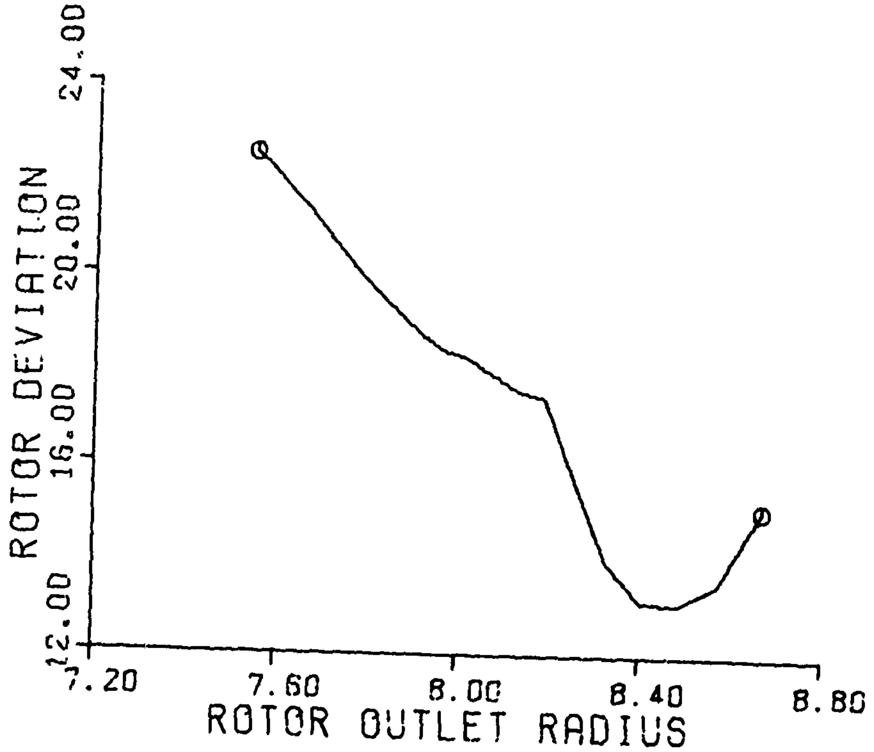


Fig. 136. Rotor Deviation vs Outlet Radius (Within-Blade Analysis, 90% Speed)

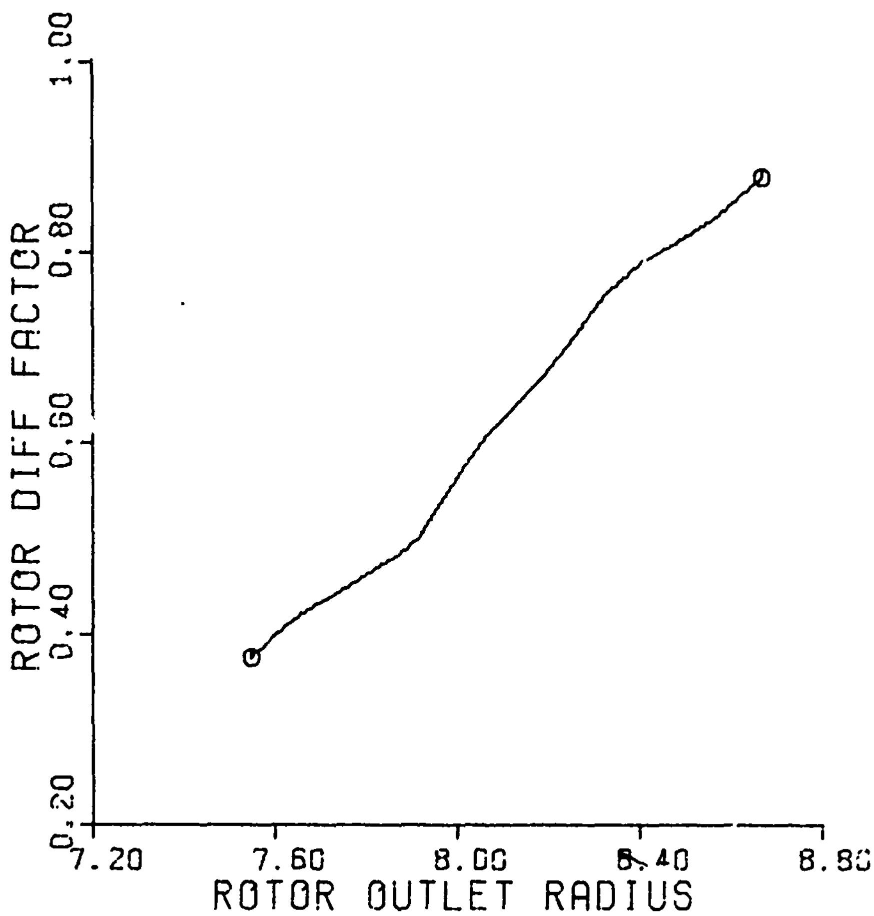


Fig. 137. Rotor Diffusion Factor vs Outlet Radius (Within-Blade Analysis, 90% Speed)

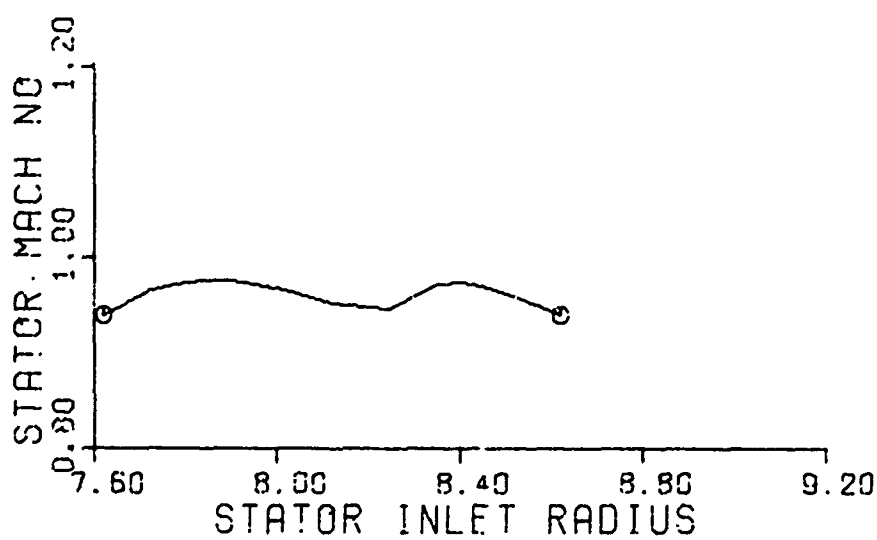


Fig. 138. Stator Mach Number vs Inlet Radius (Within-Blade Analysis, 90% Speed)

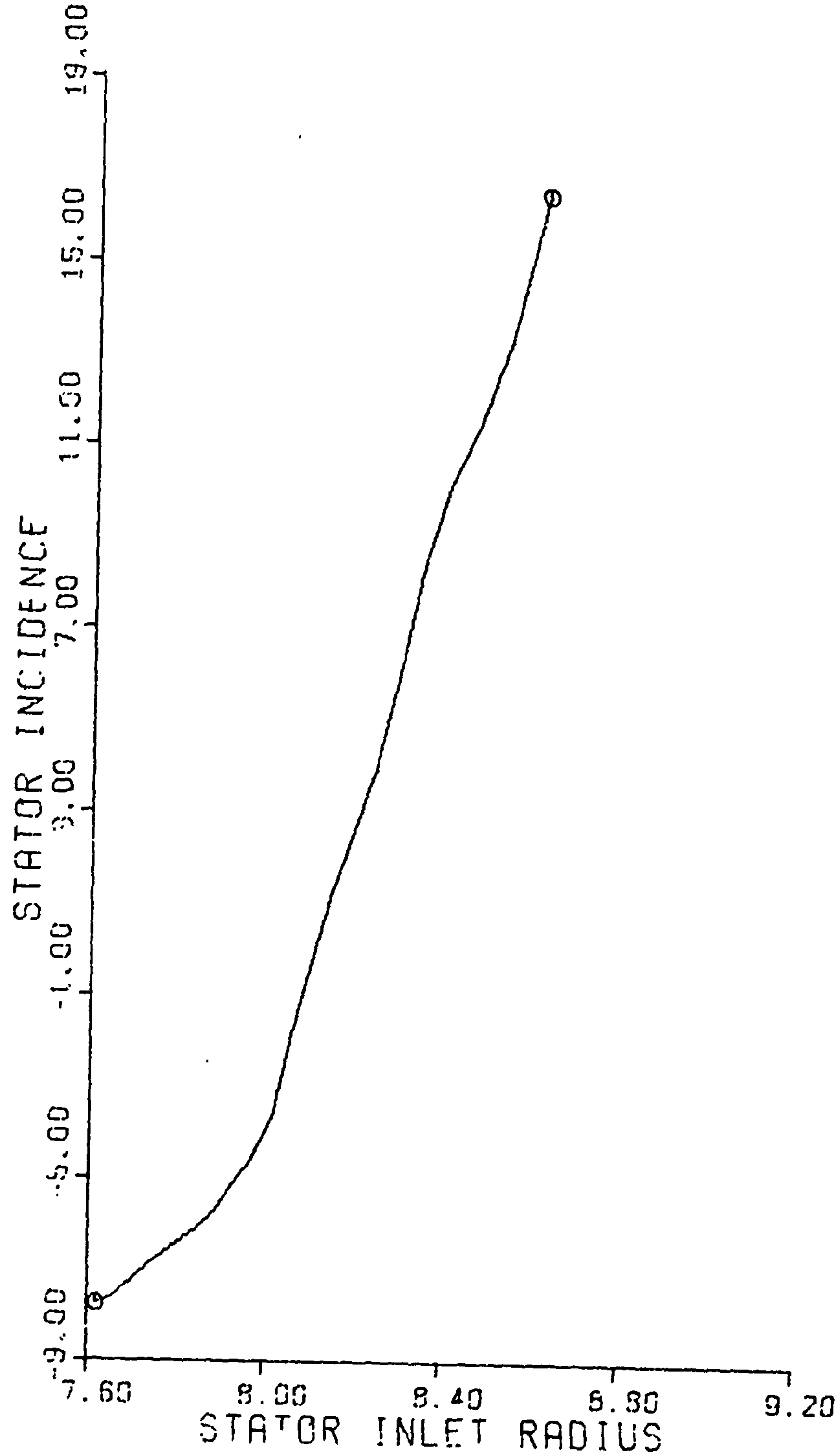


Fig. 139. Stator Incidence vs Inlet Radius (Within-Blade Analysis, 90% Speed)

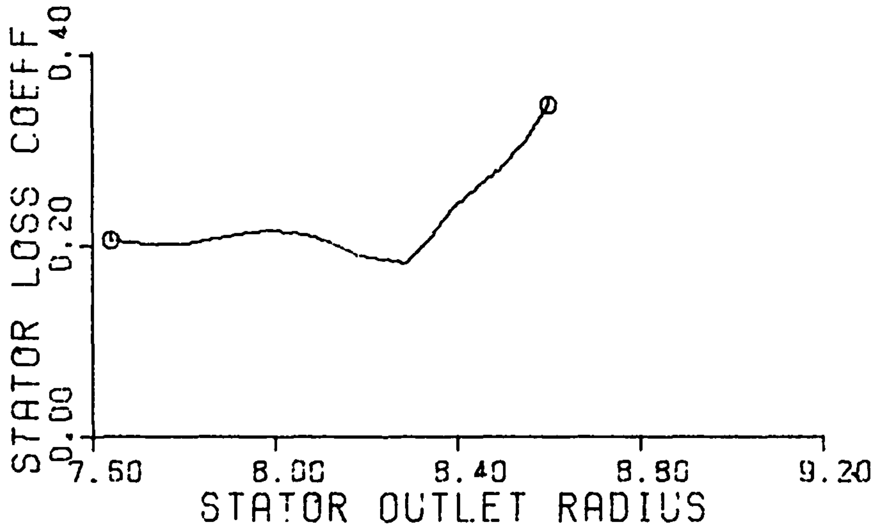


Fig. 140. Stator Loss Coefficient vs Outlet Radius
(Within-Blade Analysis, 90% Speed)

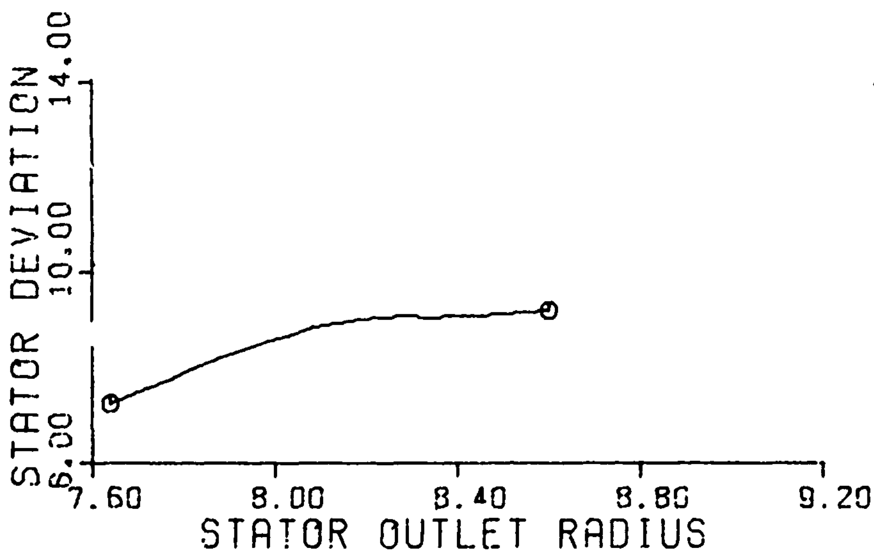


Fig. 141. Stator Deviation vs Outlet Radius
(Within-Blade Analysis, 90% Speed)

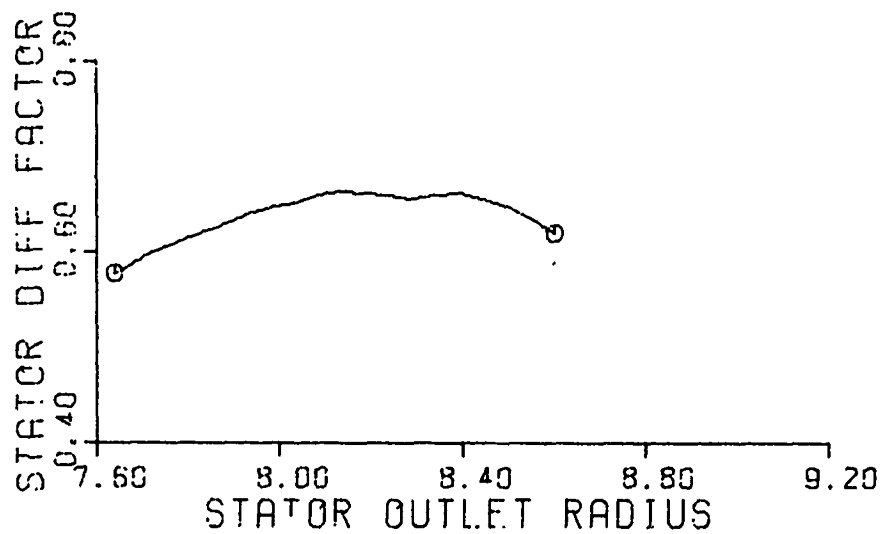


Fig. 142. Stator Diffusion Factor vs Outlet Radius
(Within-Blade Analysis, 90% Speed)

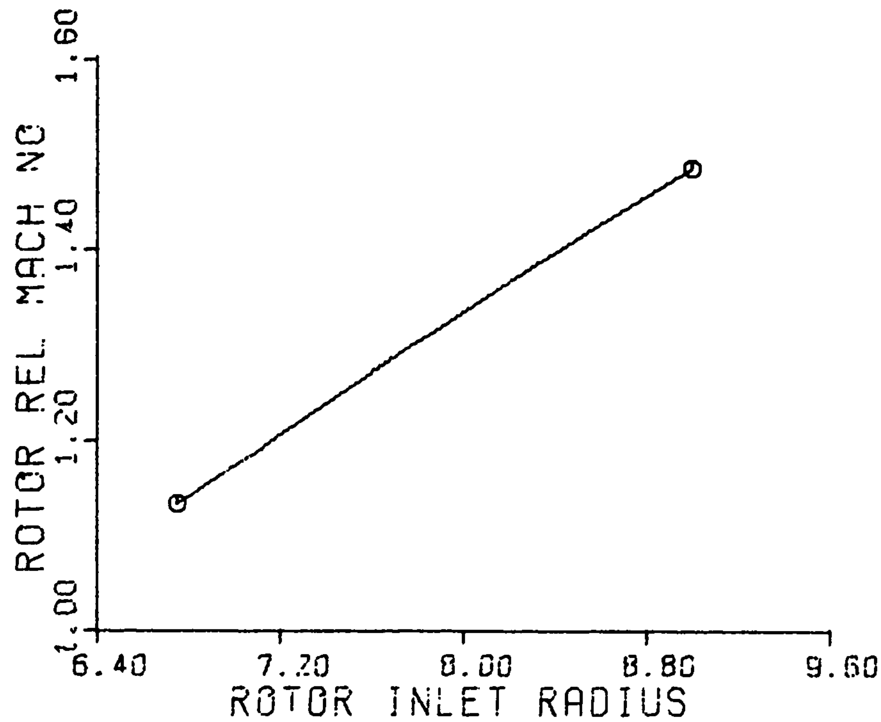


Fig. 143. Rotor Relative Mach Number vs Inlet Radius (Within-Blade Analysis, 100% Speed)

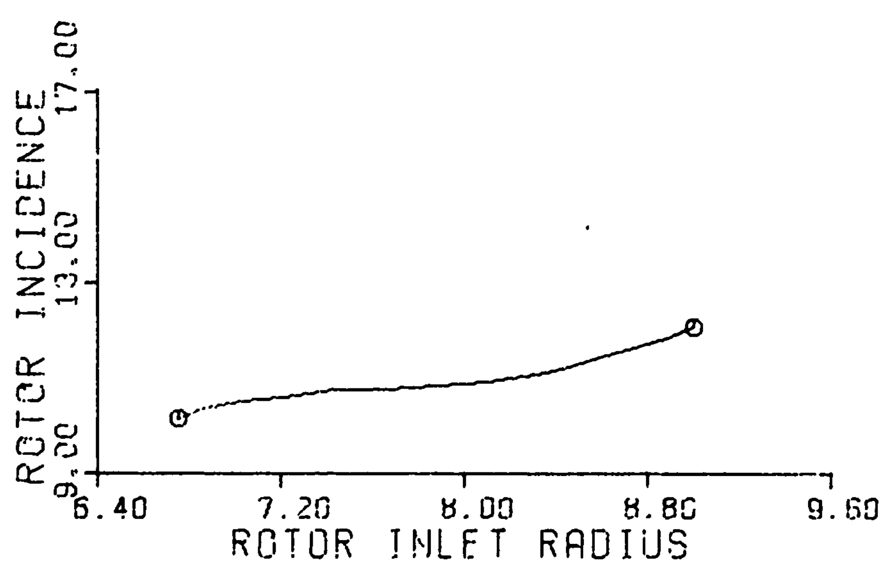


Fig. 144. Rotor Incidence vs Inlet Radius (Within-Blade Analysis, 100% Speed)

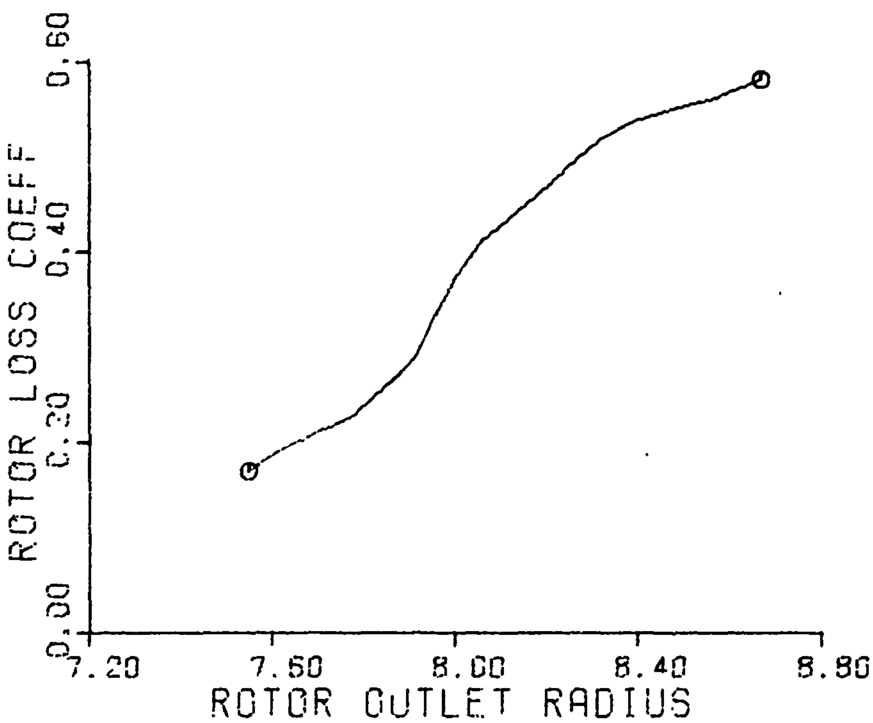


Fig. 145. Rotor Loss Coefficient vs Outlet Radius
(Within-Blade Analysis, 100% Speed)

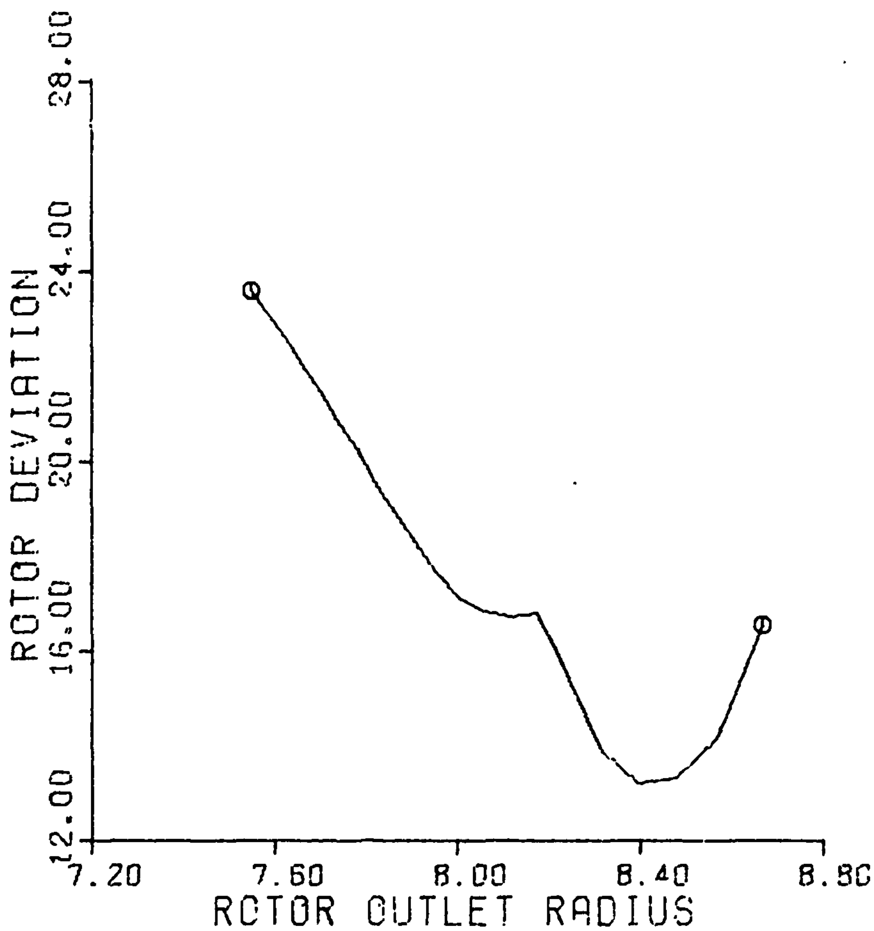


Fig. 146. Rotor Deviation vs Outlet Radius
(Within-Blade Analysis, 100% Speed)

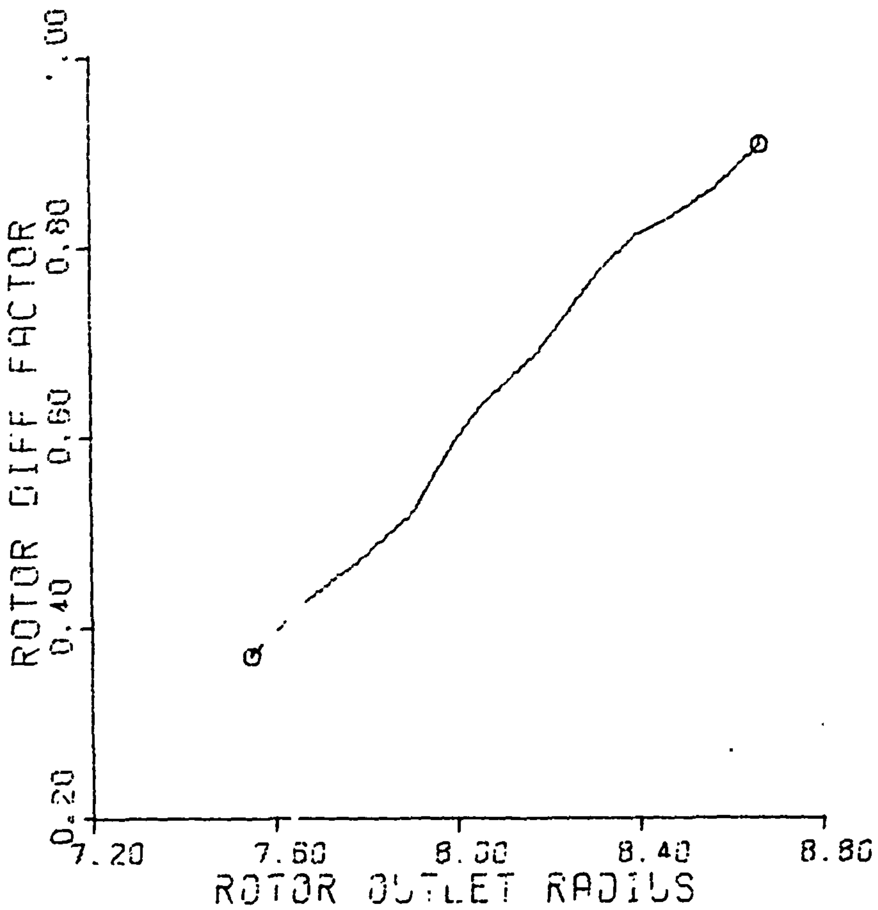


Fig. 147. Rotor Diffusion Factor vs Outlet Radius
(Within-Blade Analysis, 100% Speed)

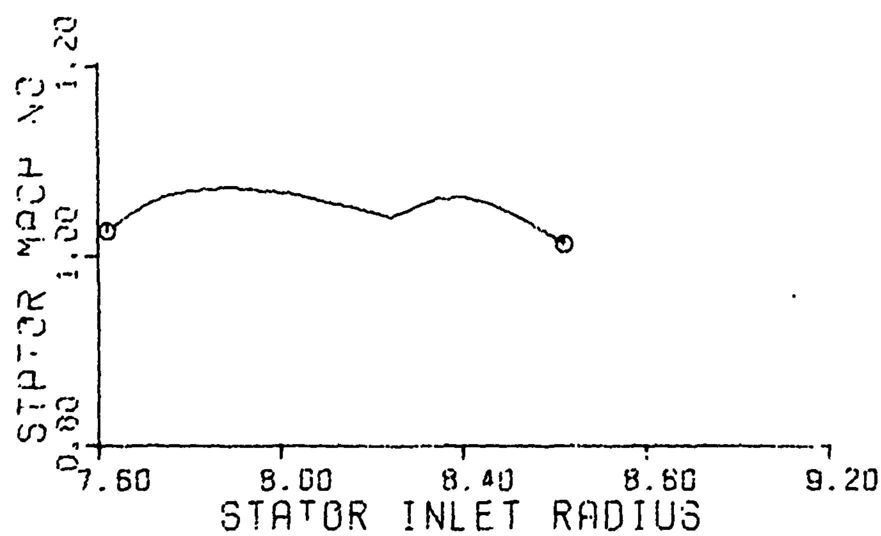


Fig. 148. Stator Mach Number vs Inlet Radius
(Within-Blade Analysis, 100% Speed)

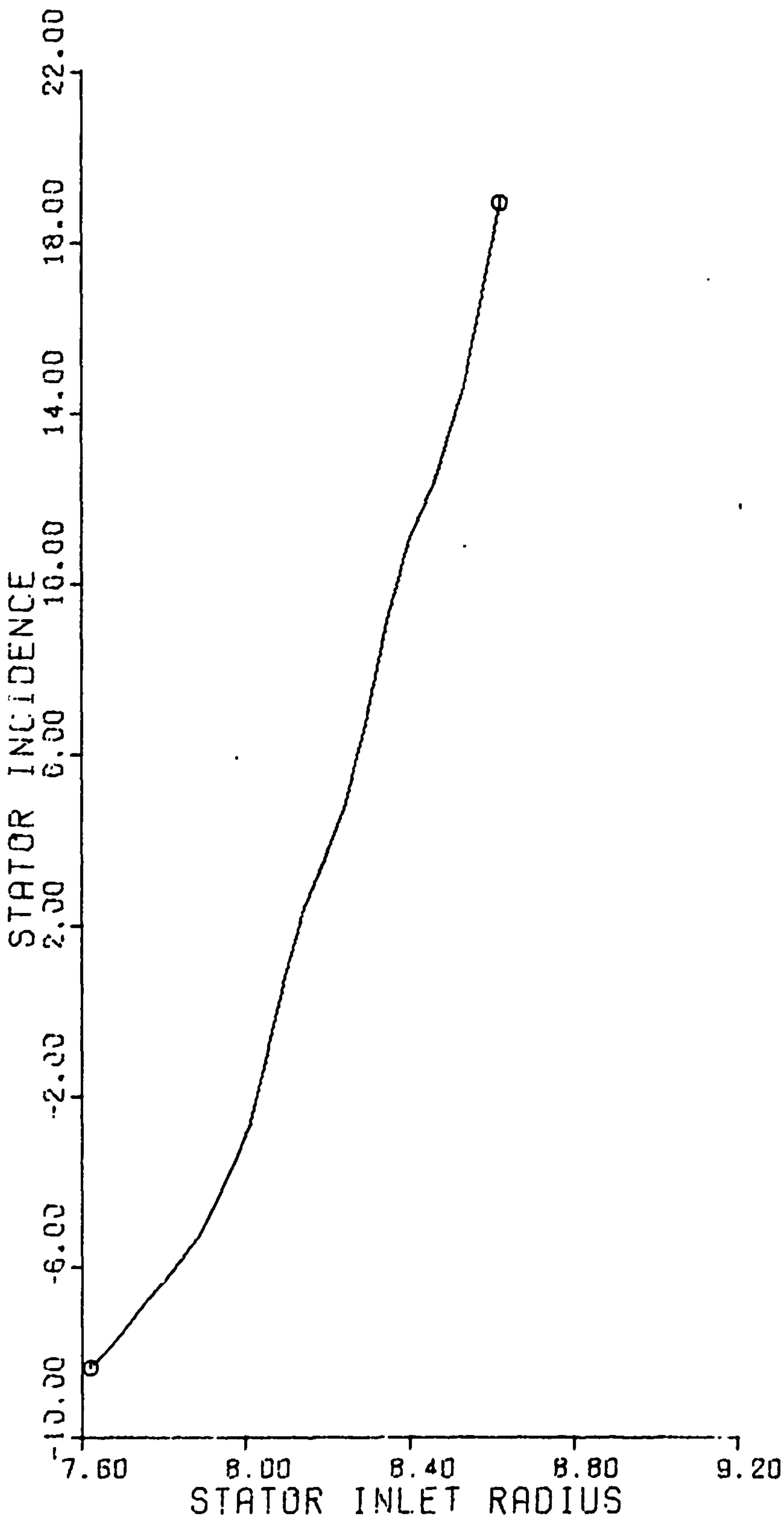


Fig. 149. Stator Incidence vs Inlet Radius
(Within-Blade Analysis, 100% Speed)

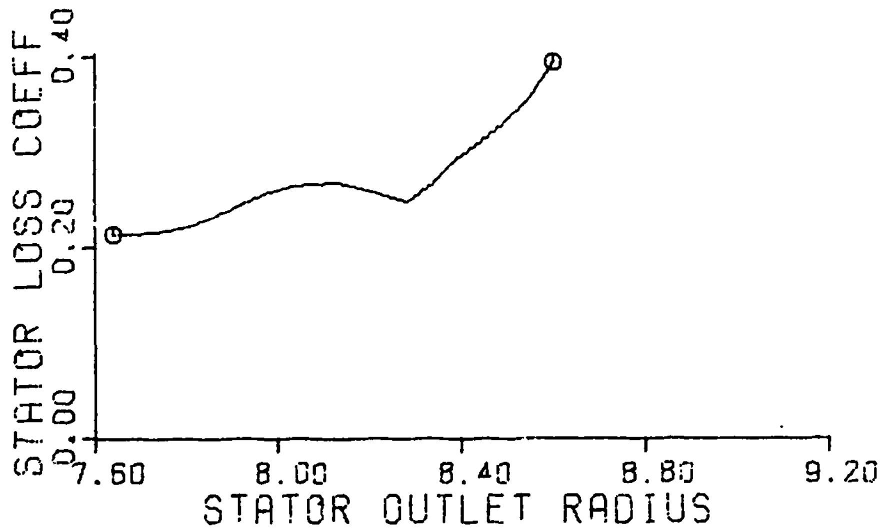


Fig. 150. Stator Loss Coefficient vs Outlet Radius
(Within-Blade Analysis, 100% Speed)

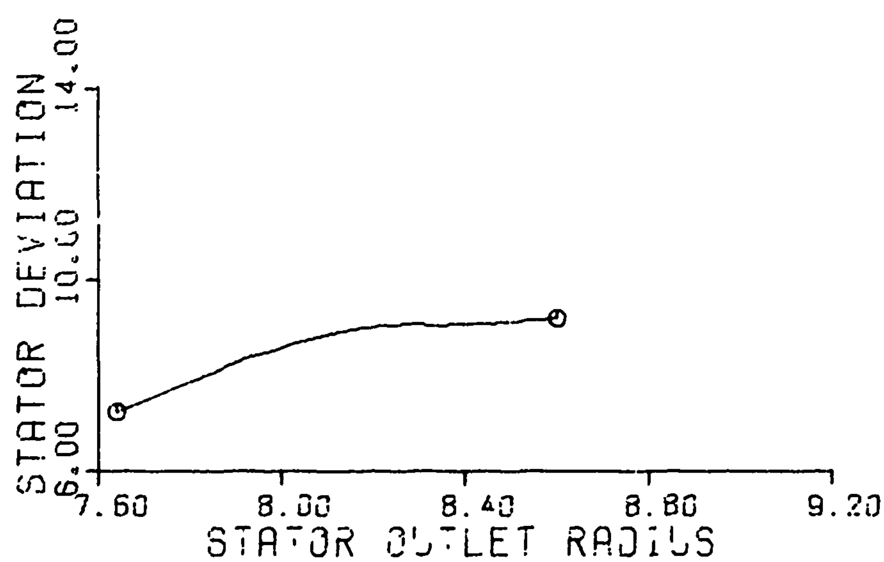


Fig. 151. Stator Deviation vs Outlet Radius
(Within-Blade Analysis, 100% Speed)

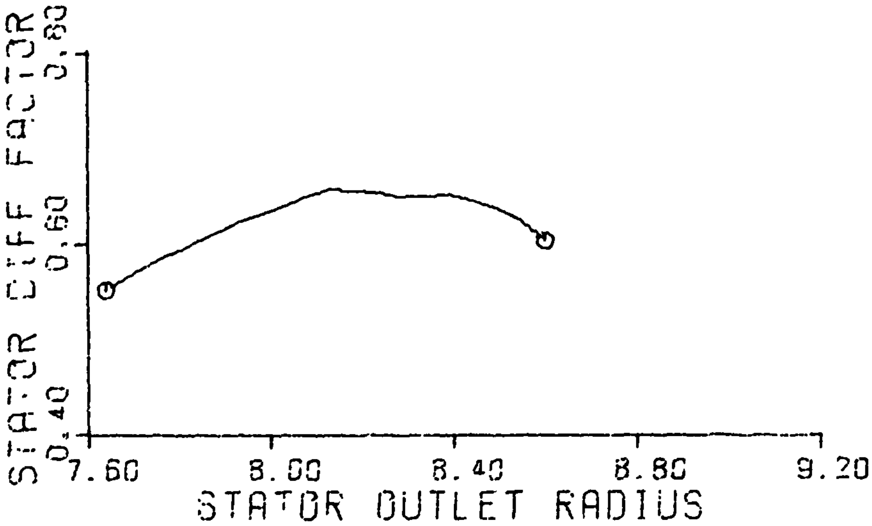


Fig. 152. Stator Diffusion Factor vs Outlet Radius (Within-Blade Analysis, 100% Speed)

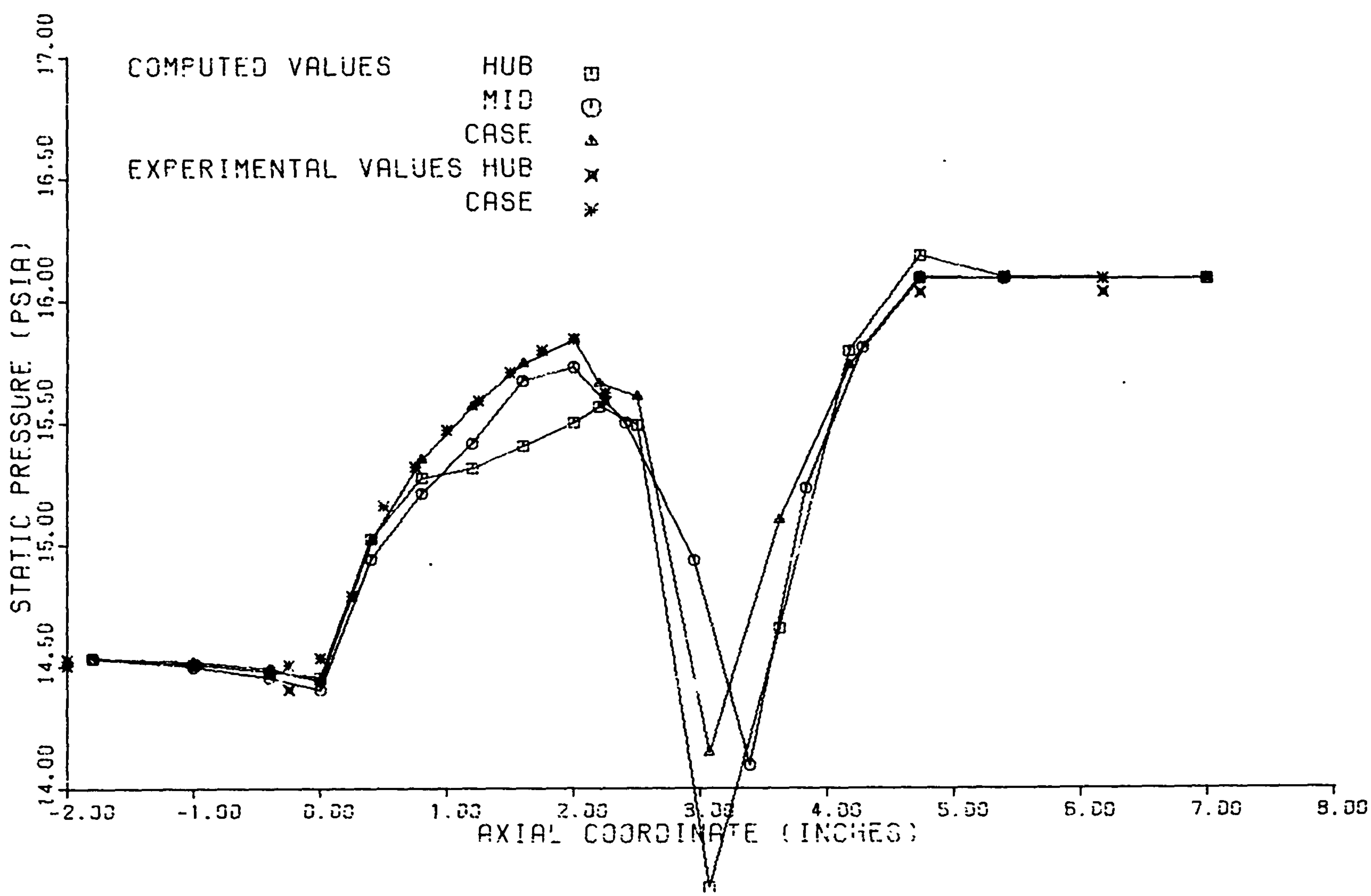


Fig. 153. Axial Static Pressure Distribution
(Within-Blade Analysis, 40% Speed)

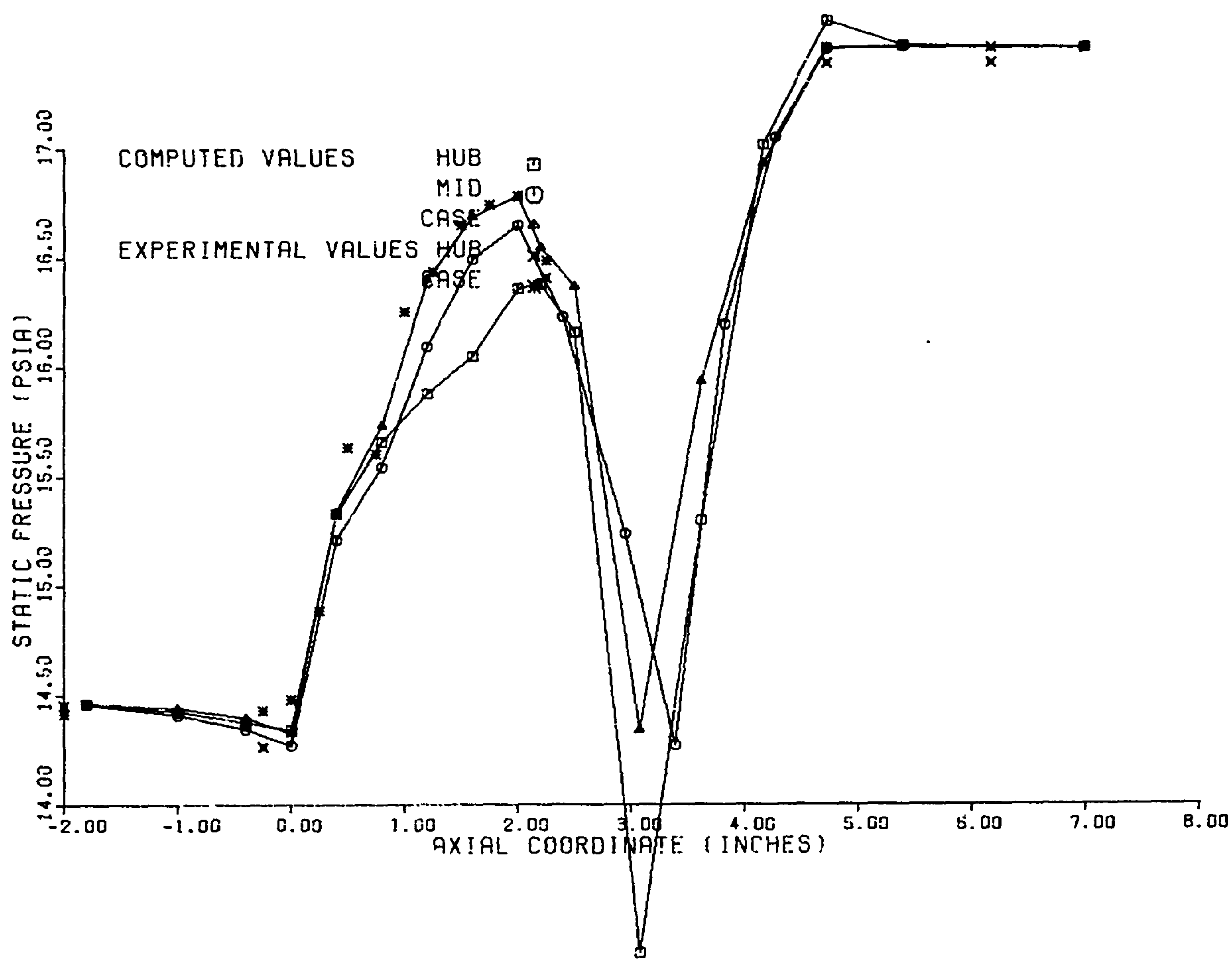


Fig. 154. Axial Static Pressure Distribution
(Within-Blade Analysis, 50% Speed)

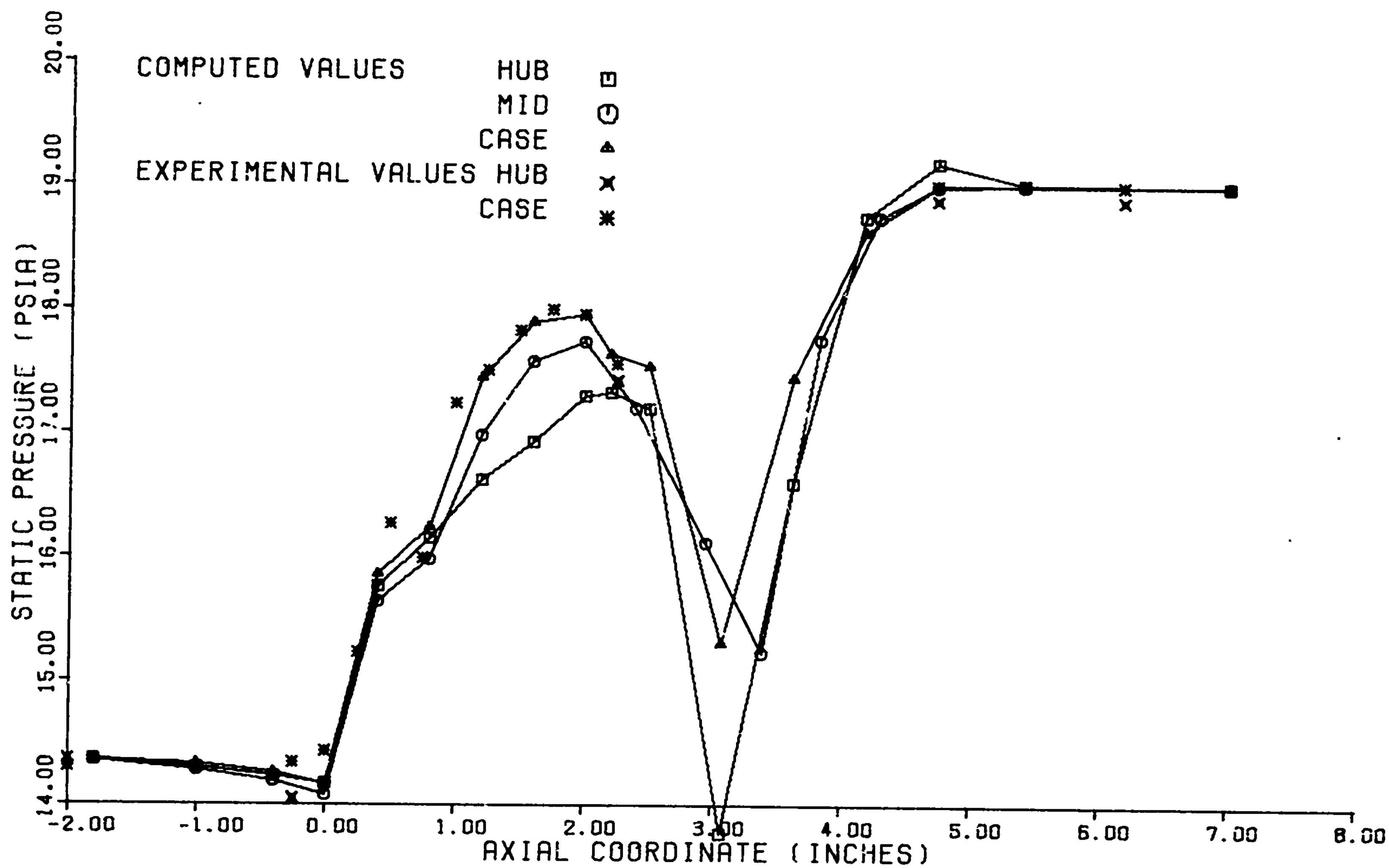


Fig. 155. Axial Static Pressure Distribution
(Within-Blade Analysis, 60% Speed)

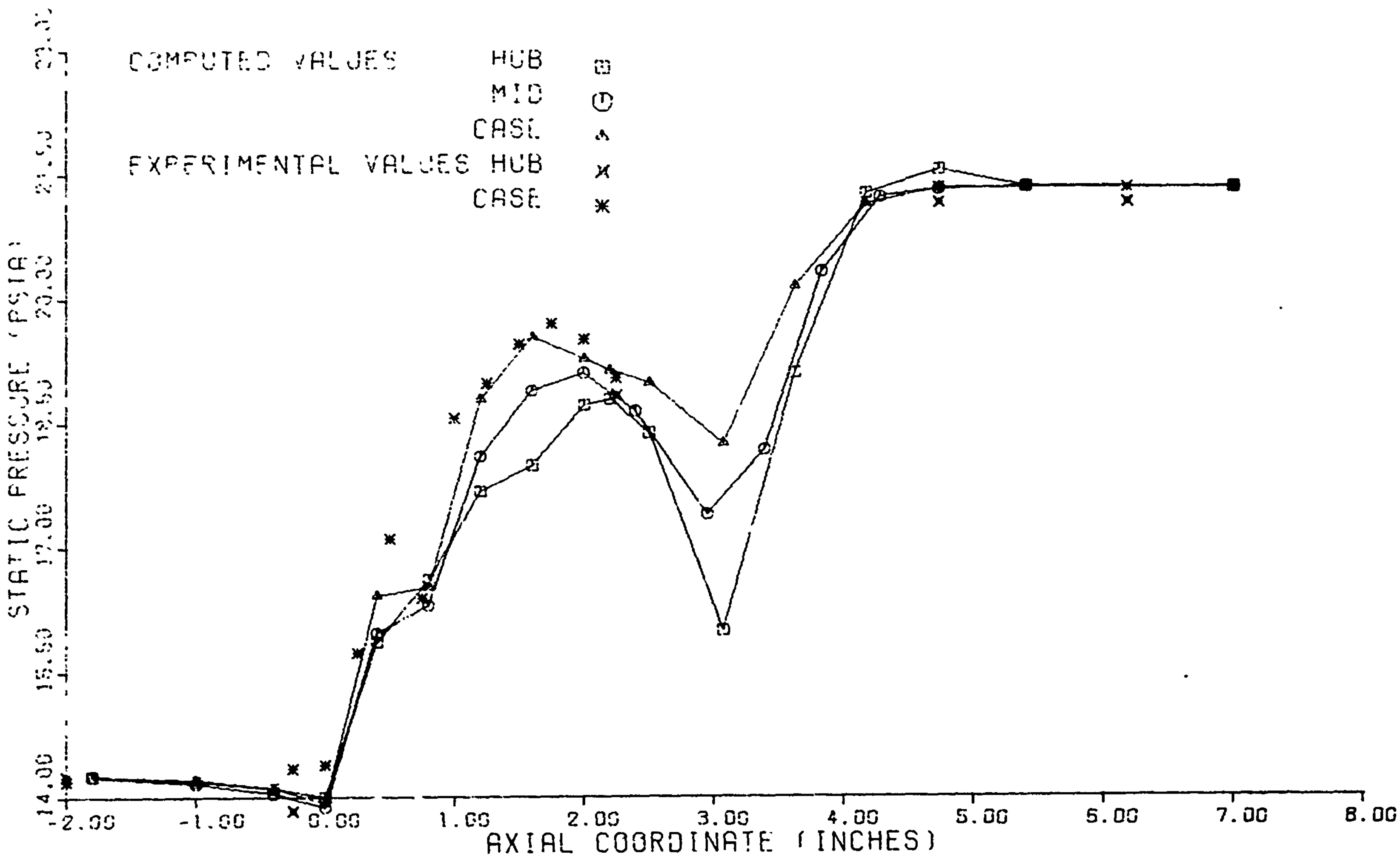


Fig. 156. Axial Static Pressure Distribution
(Within-Blade Analysis, 70% Speed)

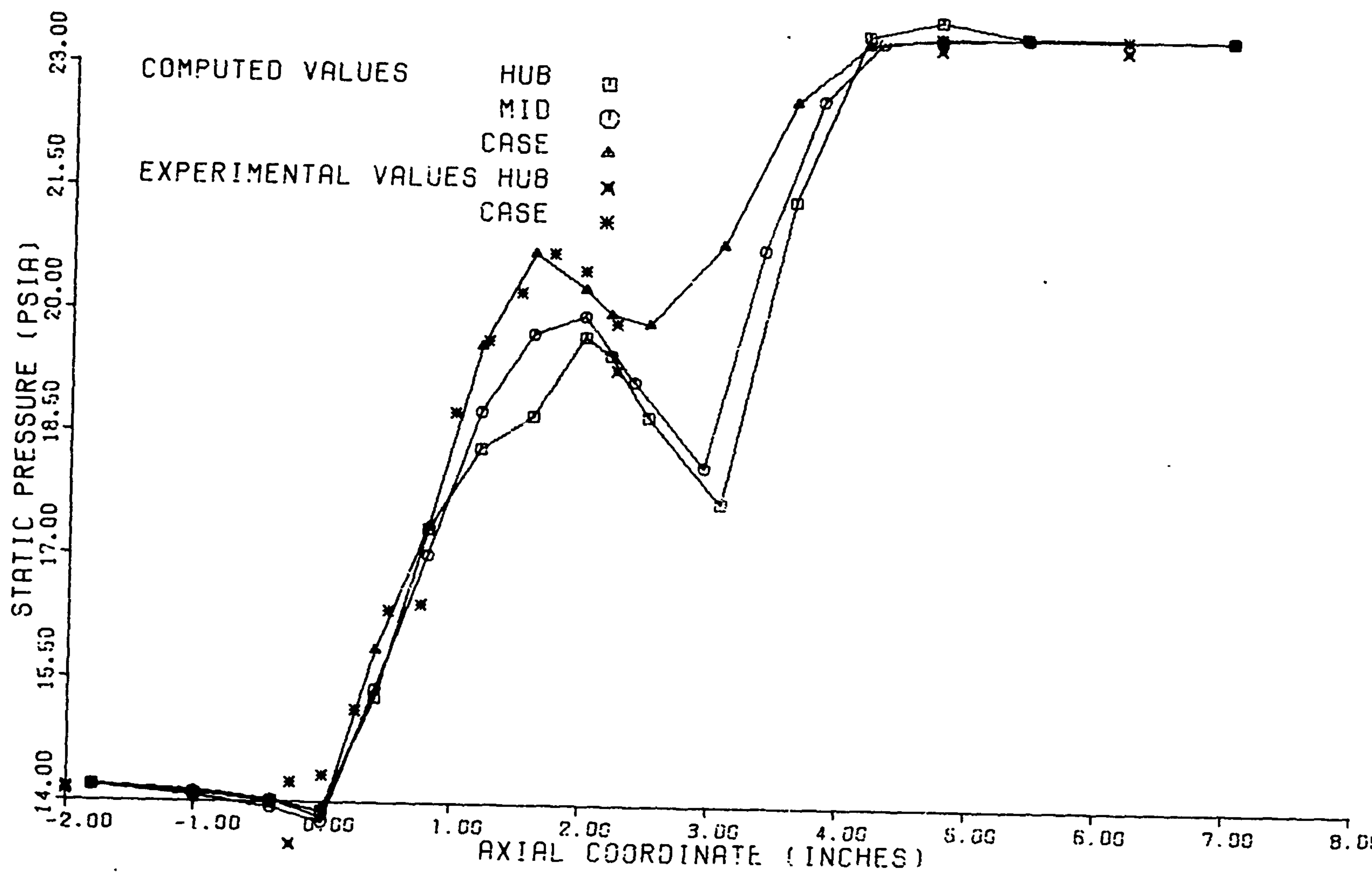


Fig. 157. Axial Static Pressure Distribution
(Within-Blade Analysis, 82% Speed)

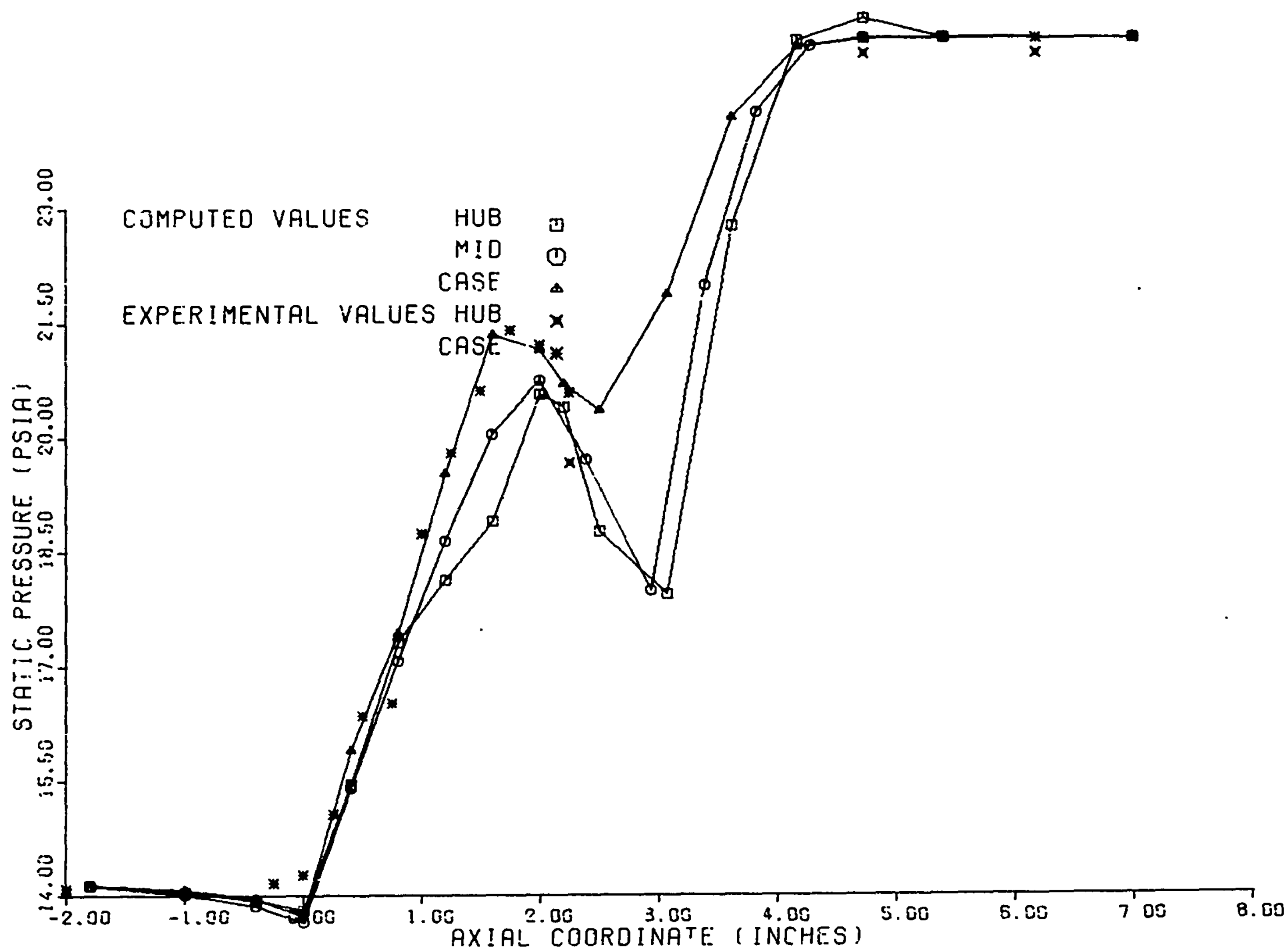


Fig. 158. Axial Static Pressure Distribution
(Within-Blade Analysis, 90% Speed)

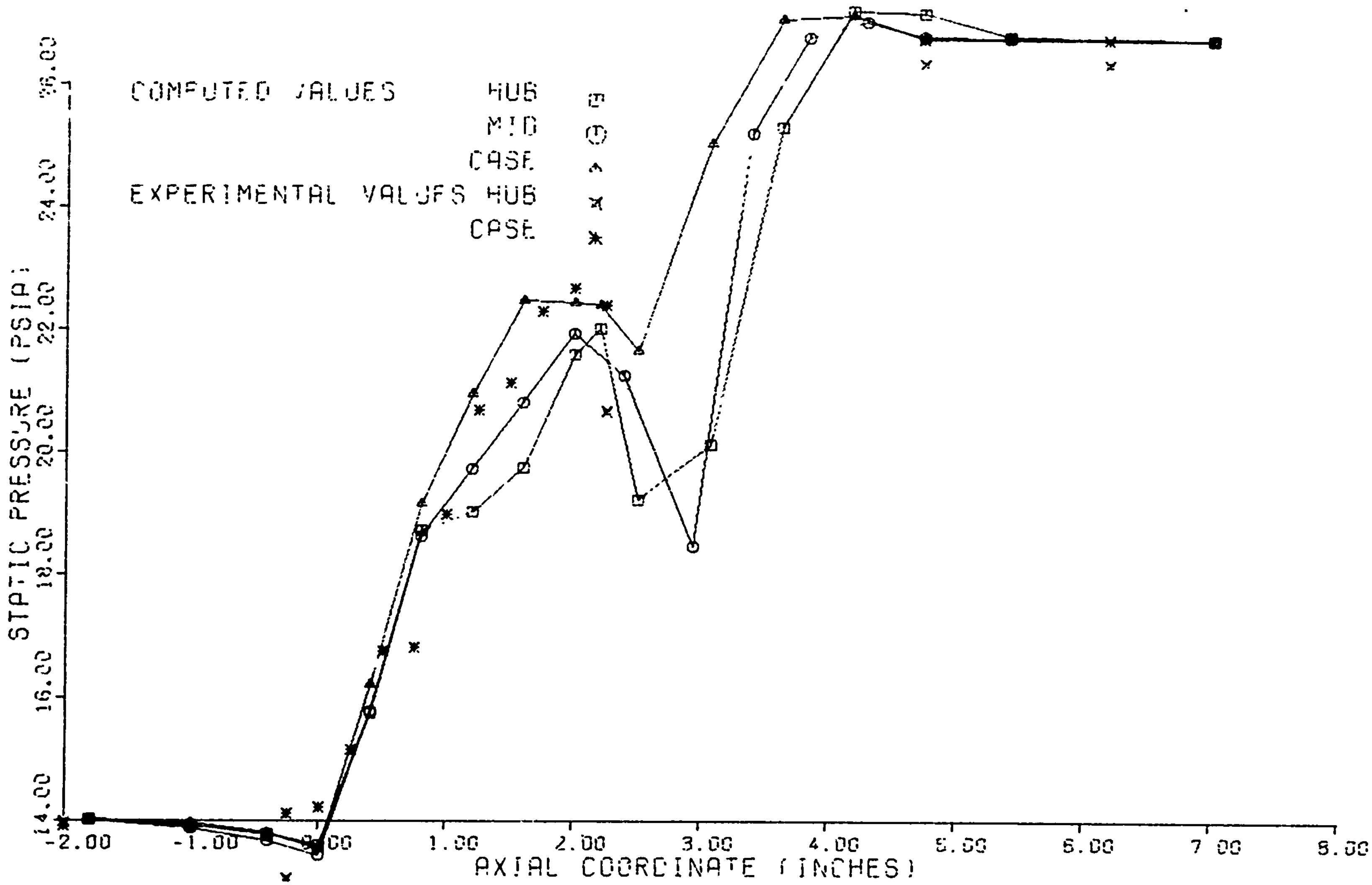


Fig. 159. Axial Static Pressure Distribution
(Within-Blade Analysis, 100% Speed)

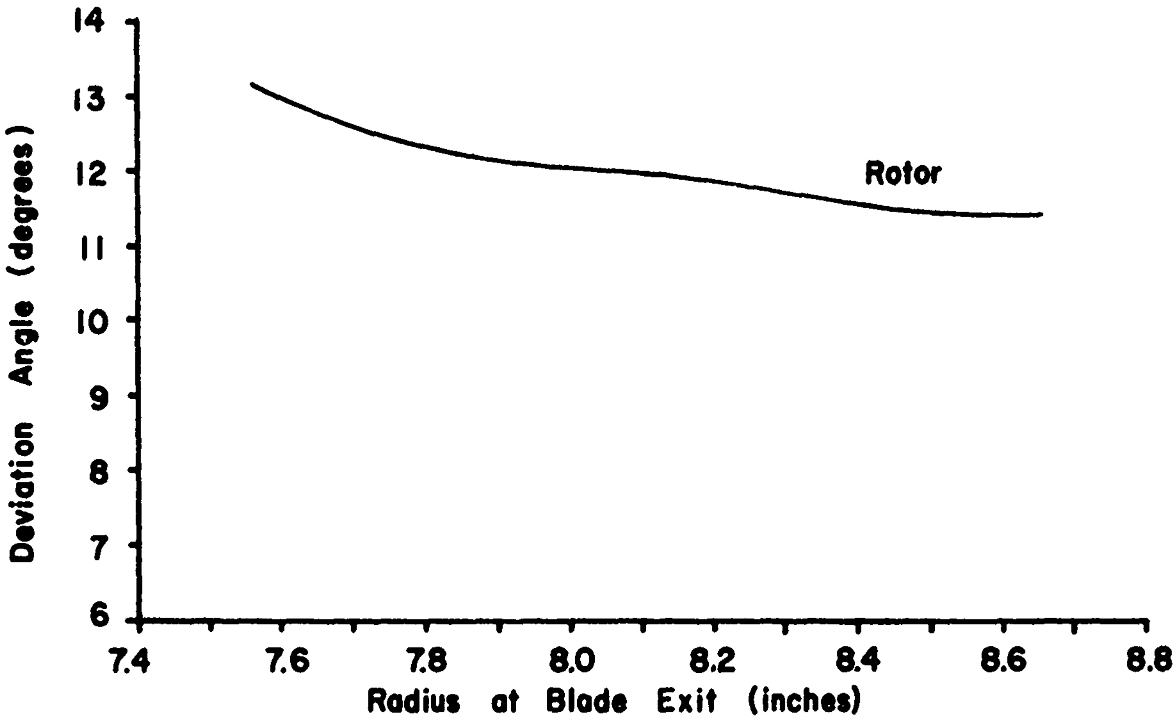


Fig. 160. Design Rotor Deviation Angle Distribution

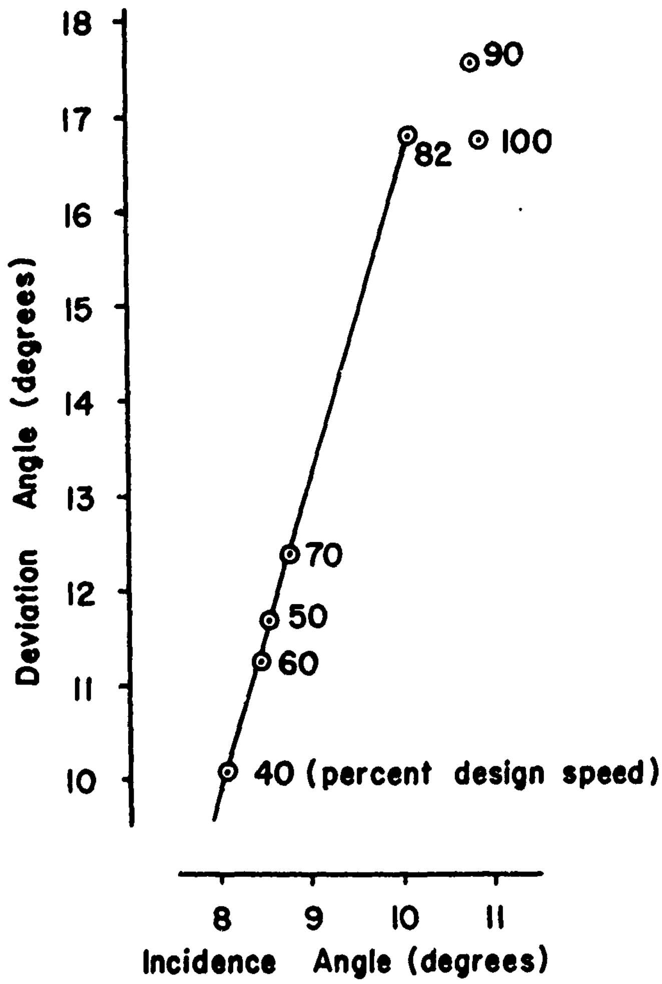


Fig. 161. Rotor Mid-Radius Deviation vs Incidence Angle

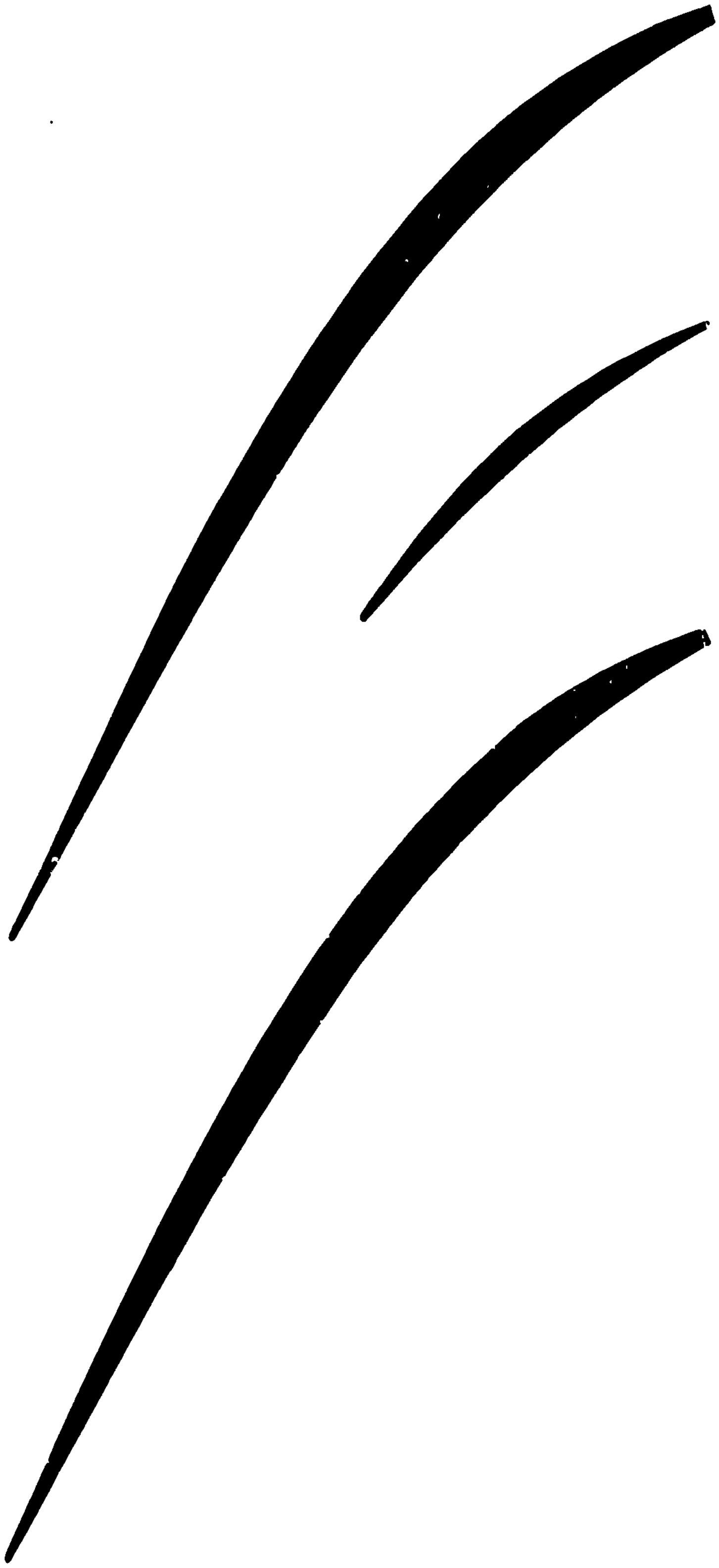


Fig. 162. Rotor with Splitter Vanes

APPENDICES

TEST DATA

APPENDIX A

PHASE II WITHIN-BLADE ANALYSES (COMPUTER PRINTOUTS)

This appendix presents the aerodynamic results (in the form of computer printouts) of the Phase II within-blade analyses for the seven test points selected for that analysis. The printout of input data which precedes the material presented herein has been removed in order to keep the number of pages to a minimum. The input data used in each of these analyses is presented in Appendix C.

I. PHASE II WITHIN-BLADE ANALYSIS
(40% SPEED)
TEST POINT 208180514040

STATION 1 FLOW FIELD DESCRIPTION

STREAM -LINE	RADIUS	VELOCITIES MERID	VELOCITIES TANGEN	VELOCITIES TOTAL	TEMPERATURES TOTAL	TEMPERATURES STATIC	PRESSURES TOTAL	PRESSURES STATIC	MACH NO	ANGLES WHIRL	ANGLES SLOPE	RADIUS OF CURVATURE	SPECIFIC WEIGHT
1	6.0696	140.42	0.00	140.42	518.688	517.072	14.696	14.536	.1253	0.00	20.93	0.000	.0750
2	6.2267	140.42	0.00	140.42	518.688	517.072	14.696	14.536	.1253	0.00	19.76	0.000	.0750
3	6.3835	140.42	0.00	140.42	518.688	517.072	14.696	14.536	.1253	0.00	18.57	0.000	.0750
4	6.5391	140.42	0.00	140.42	518.688	517.072	14.696	14.536	.1253	0.00	17.39	0.000	.0750
5	6.6936	140.42	0.00	140.42	518.688	517.072	14.696	14.536	.1253	0.00	16.20	0.000	.0750
6	6.8471	140.42	0.00	140.42	518.688	517.072	14.696	14.536	.1253	0.00	15.00	0.000	.0750
7	6.9937	140.42	0.00	140.42	518.688	517.072	14.696	14.536	.1253	0.00	13.81	0.000	.0750
8	7.1516	140.42	0.00	140.42	518.688	517.072	14.696	14.536	.1253	0.00	12.62	0.000	.0750
9	7.3027	140.42	0.00	140.42	518.688	517.072	14.696	14.536	.1253	0.00	11.43	0.000	.0750
10	7.4532	140.42	0.00	140.42	518.688	517.072	14.696	14.536	.1253	0.00	10.26	0.000	.0750
11	7.6032	140.42	0.00	140.42	518.688	517.072	14.696	14.536	.1253	0.00	9.09	0.000	.0750
12	7.7528	140.42	0.00	140.42	518.688	517.072	14.696	14.536	.1253	0.00	7.95	0.000	.0750
13	7.9020	140.42	0.00	140.42	518.688	517.072	14.696	14.536	.1253	0.00	6.83	0.000	.0750
14	8.0510	140.42	0.00	140.42	518.688	517.072	14.696	14.536	.1253	0.00	5.74	0.000	.0750
15	8.1996	140.42	0.00	140.42	518.688	517.072	14.696	14.536	.1253	0.00	4.70	0.000	.0750
16	8.3482	140.42	0.00	140.42	518.688	517.072	14.696	14.536	.1253	0.00	3.71	0.000	.0750
17	8.4966	140.42	0.00	140.42	518.688	517.072	14.696	14.536	.1253	0.00	2.78	0.000	.0750
18	8.6450	140.42	0.00	140.42	518.688	517.072	14.696	14.536	.1253	0.00	1.93	0.000	.0750
19	8.7933	140.42	0.00	140.42	518.688	517.072	14.696	14.536	.1253	0.00	1.18	0.000	.0750
20	8.9416	140.42	0.00	140.42	518.688	517.072	14.696	14.536	.1253	0.00	.52	0.000	.0750
21	9.0900	140.42	0.00	140.42	518.688	517.072	14.696	14.536	.1253	0.00	0.00	0.000	.0750

STATION 2 FLOW FIELD DESCRIPTION

STREAM -LINE	RADIUS	VELOCITIES MERID	VELOCITIES TANGEN	VELOCITIES TOTAL	TEMPERATURES TOTAL	TEMPERATURES STATIC	PRESSURES TOTAL	PRESSURES STATIC	MACH NO	ANGLES WHIRL	ANGLES SLOPE	RADIUS OF CURVATURE	SPECIFIC WEIGHT
1	6.3746	151.41	0.00	151.41	518.688	516.809	14.696	14.510	.1352	0.00	20.83	-285.758	.0749
2	6.5141	152.05	0.00	152.05	518.688	516.793	14.696	14.508	.1358	0.00	19.61	-143.172	.0749
3	6.6523	152.64	0.00	152.64	518.688	516.778	14.696	14.507	.1363	0.00	18.40	-119.658	.0749
4	6.7836	153.19	0.00	153.19	518.688	516.765	14.696	14.505	.1368	0.00	17.19	-106.516	.0749
5	6.9250	153.70	0.00	153.70	518.688	516.752	14.696	14.504	.1372	0.00	15.98	-96.576	.0749
6	7.0615	154.16	0.00	154.16	518.688	516.740	14.696	14.503	.1376	0.00	14.77	-87.439	.0749
7	7.1964	154.57	0.00	154.57	518.688	516.730	14.696	14.502	.1380	0.00	13.55	-78.427	.0749
8	7.3307	154.92	0.00	154.92	518.688	516.721	14.696	14.501	.1383	0.00	12.33	-69.574	.0749
9	7.4645	155.19	0.00	155.19	518.688	516.714	14.696	14.500	.1386	0.00	11.10	-61.133	.0749
10	7.5980	155.37	0.00	155.37	518.688	516.709	14.696	14.500	.1387	0.00	9.88	-53.330	.0749
11	7.7313	155.44	0.00	155.44	518.688	516.708	14.696	14.500	.1388	0.00	8.66	-46.295	.0749
12	7.8645	155.39	0.00	155.39	518.688	516.709	14.696	14.500	.1387	0.00	7.44	-40.062	.0749
13	7.9978	155.20	0.00	155.20	518.688	516.714	14.696	14.500	.1386	0.00	6.25	-34.603	.0749
14	8.1314	154.85	0.00	154.85	518.688	516.722	14.696	14.501	.1383	0.00	5.07	-29.854	.0749
15	8.2654	154.35	0.00	154.36	518.688	516.735	14.696	14.503	.1378	0.00	3.92	-25.742	.0749
16	8.4001	153.67	0.00	153.67	518.688	516.753	14.696	14.504	.1372	0.00	2.81	-22.191	.0749
17	8.5355	152.78	0.00	152.73	518.688	516.775	14.696	14.506	.1364	0.00	1.74	-19.138	.0749
18	8.6720	151.67	0.00	151.67	518.688	516.803	14.696	14.509	.1354	0.00	.72	-16.491	.0749
19	8.8097	150.33	0.00	150.33	518.688	516.835	14.696	14.512	.1342	0.00	-.23	-14.214	.0749
20	8.9490	148.72	0.00	148.72	518.688	516.875	14.696	14.516	.1328	0.00	-1.11	-12.248	.0749
21	9.0900	146.82	0.00	146.82	518.685	516.921	14.696	14.521	.1311	0.00	-1.91	-10.518	.0749

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STATION 3 FLOW FIELD DESCRIPTION

STREAM -LINE	RADIUS	------VELOCITIES------ MERID	TANGEN	TOTAL	--TEMPERATURES-- TOTAL	STATIC	---PRESSURES--- TOTAL	STATIC	MACH NO	---ANGLES--- WHIRL	SLOPE	RADIUS OF CURVATURE	SPECIFIC WEIGHT
1	6.6016	163.38	0.00	163.38	518.688	516.500	14.696	14.479	.1459	0.00	20.54	-83.831	.0748
2	6.7260	164.12	0.00	164.12	518.688	516.480	14.696	14.477	.1466	0.00	19.42	-374.576	.0748
3	6.8499	165.04	0.00	165.04	518.688	516.456	14.696	14.475	.1474	0.00	18.26	340.131	.0748
4	6.9730	166.05	0.00	166.05	518.688	516.428	14.696	14.472	.1483	0.00	17.08	174.665	.0748
5	7.0953	167.09	0.00	167.09	518.688	516.400	14.696	14.469	.1492	0.00	15.86	196.674	.0748
6	7.2170	168.12	0.00	168.12	518.688	516.371	14.696	14.467	.1502	0.00	14.61	185.715	.0747
7	7.3350	169.08	0.00	169.08	518.688	516.345	14.696	14.464	.1510	0.00	13.33	326.155	.0747
8	7.4595	169.95	0.00	169.95	518.688	516.321	14.696	14.462	.1518	0.00	12.03	-3193.951	.0747
9	7.5786	170.68	0.00	170.68	518.688	516.300	14.696	14.460	.1525	0.00	10.70	-219.353	.0747
10	7.6983	171.25	0.00	171.25	518.688	516.284	14.696	14.458	.1530	0.00	9.35	-104.771	.0747
11	7.8179	171.63	0.00	171.63	518.688	516.274	14.696	14.457	.1533	0.00	8.00	-65.741	.0747
12	7.9375	171.80	0.00	171.80	518.688	516.269	14.696	14.457	.1535	0.00	6.63	-46.346	.0747
13	8.0573	171.74	0.00	171.74	518.688	516.271	14.696	14.457	.1534	0.00	5.25	-34.832	.0747
14	8.1775	171.42	0.00	171.42	518.688	516.280	14.636	14.458	.1531	0.00	3.87	-27.255	.0747
15	8.2983	170.81	0.00	170.81	518.688	516.297	14.696	14.459	.1526	0.00	2.49	-21.936	.0747
16	8.4200	169.91	0.00	169.91	518.688	516.322	14.696	14.462	.1518	0.00	1.11	-18.039	.0747
17	8.5427	168.67	0.00	168.67	518.688	516.355	14.696	14.465	.1507	0.00	-.26	-15.096	.0747
18	8.6668	167.09	0.00	167.09	518.688	516.400	14.696	14.470	.1492	0.00	-1.61	-12.825	.0748
19	8.7925	165.14	0.00	165.14	518.688	516.453	14.696	14.475	.1475	0.00	-2.94	-11.858	.0748
20	8.9201	162.84	0.00	162.84	518.688	516.515	14.696	14.481	.1454	0.00	-4.24	-9.695	.0748
21	9.0500	160.13	0.00	160.13	518.688	516.585	14.696	14.488	.1430	0.00	-5.47	-8.698	.0748

STATION 4 FLOW FIELD DESCRIPTION

STREAM -LINE	RADIUS	------VELOCITIES------ MERID	TANGEN	TOTAL	--TEMPERATURES-- TOTAL	STATIC	---PRESSURES--- TOTAL	STATIC	MACH NO	---ANGLES--- WHIRL	SLOPE	RADIUS OF CURVATURE	SPECIFIC WEIGHT
1	6.7500	172.25	0.00	172.26	518.688	516.255	14.696	14.455	.1539	0.00	20.32	-388.094	.0747
2	6.8667	174.55	0.00	174.56	518.688	516.191	14.696	14.449	.1559	0.00	19.29	-134.414	.0747
3	6.9822	176.77	0.00	176.77	518.688	516.127	14.696	14.443	.1579	0.00	18.17	-88.434	.0747
4	7.0965	178.85	0.00	178.83	518.688	516.065	14.696	14.437	.1598	0.00	16.99	-69.756	.0746
5	7.2097	180.87	0.00	180.87	518.688	516.007	14.696	14.431	.1616	0.00	15.75	-59.551	.0746
6	7.3219	182.72	0.00	182.72	518.688	515.952	14.696	14.425	.1633	0.00	14.46	-52.353	.0746
7	7.4332	184.41	0.00	184.41	518.688	515.901	14.696	14.420	.1648	0.00	13.12	-46.487	.0746
8	7.5437	185.90	0.00	185.90	518.688	515.855	14.696	14.416	.1661	0.00	11.74	-41.691	.0746
9	7.6537	187.18	0.00	187.18	518.688	515.816	14.696	14.412	.1673	0.00	10.33	-37.910	.0745
10	7.7632	188.23	0.00	188.23	518.688	515.784	14.696	14.409	.1682	0.00	8.89	-35.195	.0745
11	7.8725	189.03	0.00	189.03	518.688	515.759	14.696	14.407	.1689	0.00	7.43	-33.378	.0745
12	7.9818	189.55	0.00	189.58	518.688	515.742	14.696	14.405	.1694	0.00	5.96	-31.939	.0745
13	8.0912	189.85	0.00	189.85	518.688	515.734	14.696	14.404	.1697	0.00	4.46	-30.332	.0745
14	8.2009	189.83	0.00	189.83	518.688	515.734	14.696	14.404	.1697	0.00	2.93	-28.176	.0745
15	8.3111	189.47	0.00	189.47	518.688	515.746	14.696	14.405	.1693	0.00	1.39	-25.756	.0745
16	8.4222	188.73	0.00	188.73	518.688	515.768	14.696	14.407	.1687	0.00	-.17	-23.525	.0745
17	8.5343	187.59	0.00	187.59	518.688	515.804	14.696	14.411	.1676	0.00	-1.75	-21.421	.0745
18	8.6477	186.01	0.00	186.01	518.688	515.852	14.696	14.416	.1662	0.00	-3.34	-19.024	.0746
19	8.7628	183.89	0.00	183.89	518.688	515.916	14.696	14.422	.1643	0.00	-4.95	-16.228	.0746
20	8.8801	181.14	0.00	181.14	518.688	515.999	14.696	14.430	.1618	0.00	-6.59	-13.249	.0746
21	9.0000	177.58	0.00	177.58	518.688	516.183	14.696	14.440	.1587	0.00	-8.25	-10.317	.0747

BLADE DATA

LOCAT -ION	BLADE-ANGLES SECTION	LEAN	REL FLOW ANGLE	DEVIATION INCIDENCE	LOSS COEFF	BLADE SPEED	RELATIVE MACH NO	RELATIVE VELOCITY	RELATIVE PRESSURE	RELATIVE TEMPERATURE	PRESSURE RATIO	DELTA T ON T	ISENTROPIC EFFICIENCY	POLYTROPIC EFFICIENCY
1	-62.667	17.205	-70.268	-7.602	0.0000	480.3	.4558	510.24	16.666	537.589	1.000	0.000	1.0000	1.0000
2	-62.593	16.450	-70.339	-7.747	0.0000	488.6	.4635	518.83	16.738	538.248	1.000	0.000	1.0000	1.0000
3	-62.593	15.434	-70.413	-7.820	0.0000	496.8	.4711	527.31	16.810	538.311	1.000	0.000	1.0000	1.0000
4	-62.659	14.148	-70.492	-7.833	0.0000	504.9	.4785	535.68	16.883	539.378	1.000	0.000	1.0000	1.0000
5	-62.723	12.766	-70.578	-7.855	0.0000	513.0	.4860	543.94	16.957	540.250	1.000	0.000	1.0000	1.0000
6	-62.759	11.443	-70.673	-7.913	0.0000	521.0	.4933	552.08	17.032	540.326	1.000	0.000	1.0000	1.0000
7	-62.816	10.299	-70.778	-7.962	0.0000	528.9	.5005	560.11	17.108	541.507	1.000	0.000	1.0000	1.0000
8	-62.921	9.381	-70.897	-7.975	0.0000	536.8	.5075	568.03	17.184	542.293	1.000	0.000	1.0000	1.0000
9	-63.049	8.554	-71.031	-7.983	0.0000	544.6	.5146	575.85	17.261	542.386	1.000	0.000	1.0000	1.0000
10	-63.172	7.696	-71.183	-8.011	0.0000	552.4	.5215	583.56	17.340	543.587	1.000	0.000	1.0000	1.0000
11	-63.292	6.864	-71.353	-8.061	0.0000	560.2	.5283	591.19	17.419	544.395	1.000	0.000	1.0000	1.0000
12	-63.418	6.170	-71.541	-8.123	0.0000	567.9	.5351	598.73	17.500	545.114	1.000	0.000	1.0000	1.0000
13	-63.546	5.640	-71.749	-8.203	0.0000	575.7	.5418	606.21	17.583	545.343	1.000	0.000	1.0000	1.0000
14	-63.662	5.243	-71.979	-8.317	0.0000	583.5	.5484	613.62	17.667	546.584	1.000	0.000	1.0000	1.0000
15	-63.763	4.923	-72.235	-8.472	0.0000	591.4	.5550	620.97	17.753	547.338	1.000	0.000	1.0000	1.0000
16	-63.852	4.581	-72.518	-8.667	0.0000	599.3	.5615	628.28	17.841	548.109	1.000	0.000	1.0000	1.0000
17	-63.939	4.142	-72.832	-8.893	0.0000	607.2	.5680	635.55	17.931	548.397	1.000	0.000	1.0000	1.0000
18	-64.043	3.610	-73.180	-9.137	0.0000	615.3	.5744	642.80	18.024	549.704	1.000	0.000	1.0000	1.0000
19	-64.181	3.010	-73.567	-9.386	0.0000	623.5	.5809	650.05	18.120	550.535	1.000	0.000	1.0000	1.0000
20	-64.336	2.397	-74.003	-9.668	0.0000	631.8	.5873	657.29	18.219	551.393	1.000	0.000	1.0000	1.0000
21	-64.476	1.836	-74.501	-10.024	0.0000	640.4	.5937	664.54	18.323	552.282	1.000	0.000	1.0000	1.0000

STATION 5 FLOW FIELD DESCRIPTION

STREAM -LINE	RADIUS	------VELOCITIES------- MERID	TANGEN	TOTAL	--TEMPERATURES-- TOTAL	STATIC	---PRESSURES--- TOTAL	STATIC	MACH NO	---ANGLES--- WHIRL	SLOPE	RADIUS OF CURVATURE	SPECIFIC WEIGHT
1	6.8979	213.17	94.67	233.25	526.304	521.845	15.481	15.025	.2072	23.95	22.32	6.199	.0768
2	7.0050	217.12	93.85	236.54	526.356	521.771	15.484	15.016	.2102	23.38	21.16	6.336	.0768
3	7.1125	220.88	92.36	239.61	526.390	521.685	15.487	15.006	.2129	22.80	19.87	6.735	.0767
4	7.2174	224.45	91.75	242.47	526.410	521.592	15.487	14.995	.2155	22.23	18.46	7.425	.0767
5	7.3210	227.95	90.65	245.32	526.427	521.496	15.488	14.984	.2180	21.69	16.98	8.472	.0767
6	7.4234	231.45	89.69	248.25	526.453	521.402	15.490	14.974	.2207	21.18	15.44	9.973	.0756
7	7.5245	234.81	88.92	251.09	526.491	521.324	15.492	14.964	.2232	20.74	13.85	12.118	.0766
8	7.6248	237.84	88.21	253.67	526.532	521.253	15.494	14.956	.2255	20.35	12.22	15.361	.0766
9	7.7243	240.53	87.67	256.01	526.585	521.214	15.498	14.949	.2276	20.03	10.58	20.813	.0765
10	7.8234	242.81	87.59	258.12	526.680	521.219	15.502	14.945	.2295	19.84	8.92	31.674	.0765
11	7.9223	244.88	87.67	260.10	526.788	521.244	15.508	14.942	.2312	19.70	7.27	62.556	.0765
12	8.0210	246.85	87.73	261.99	526.895	521.270	15.516	14.942	.2329	19.57	5.61	605.617	.0765
13	8.1197	248.80	87.70	263.81	526.993	521.290	15.525	14.943	.2345	19.42	3.95	-91.083	.0765
14	8.2186	250.57	87.83	265.52	527.105	521.328	15.536	14.946	.2360	19.32	2.28	-46.672	.0765
15	8.3177	251.71	88.99	256.98	527.310	521.479	15.548	14.951	.2373	19.47	.61	-34.298	.0765
16	8.4176	252.19	91.10	268.14	527.730	521.739	15.561	14.959	.2383	19.86	-1.05	-29.686	.0765
17	8.5183	252.34	93.19	268.93	527.946	522.015	15.573	14.968	.2390	20.27	-2.68	-28.898	.0765
18	8.6201	252.47	94.36	269.53	528.174	522.221	15.586	14.978	.2394	20.49	-4.31	-31.321	.0765
19	8.7232	252.17	95.47	269.63	528.400	522.443	15.598	14.989	.2394	20.74	-5.95	-38.944	.0765
20	8.8277	251.45	96.54	269.37	528.626	522.680	15.609	15.001	.2391	21.00	-7.64	-64.330	.0766
21	8.9340	250.50	97.60	268.34	528.856	522.934	15.619	15.013	.2386	21.29	-9.38	-1665.883	.0766

BLADE DATA

LOCAT-ION	BLADE-ANGLES SECTION	BLADE-ANGLES LEAN	REL FLOW ANGLE	DEVIATION INCIDENCE	LOSS COEFF	BLADE SPEED	RELATIVE MACH NO	RELATIVE VELOCITY	RELATIVE PRESSURE	RELATIVE TEMPERATURE	PRESSURE RATIO	DELTA T ON T	ISENTROPIC EFFICIENCY	POLYTROPIC EFFICIENCY
1	-60.252	10.482	-51.714	-1.462	-.0061	490.8	.3997	449.85	16.770	538.426	1.053	.015	1.0157	1.0156
2	-60.373	9.963	-51.783	-1.410	-.0052	498.5	.4080	459.22	16.837	539.049	1.054	.015	1.0138	1.0137
3	-60.516	9.031	-51.873	-1.357	-.0044	506.1	.4164	468.54	16.904	539.672	1.054	.015	1.0119	1.0118
4	-60.675	7.807	-51.981	-1.306	-.0037	513.5	.4246	477.79	16.972	540.296	1.054	.015	1.0104	1.0103
5	-60.826	6.578	-52.084	-1.259	-.0031	520.9	.4328	486.92	17.039	540.921	1.054	.015	1.0090	1.0089
6	-60.954	5.538	-52.170	-1.217	-.0025	528.2	.4407	495.85	17.108	541.546	1.054	.015	1.0076	1.0075
7	-61.077	4.730	-52.258	-1.181	-.0018	535.4	.4484	504.45	17.175	542.174	1.054	.015	1.0053	1.0053
8	-61.213	4.101	-52.367	-1.154	-.0011	542.5	.4559	512.80	17.244	542.803	1.054	.015	1.0032	1.0032
9	-61.359	3.738	-52.494	-1.135	-.0002	549.5	.4630	520.81	17.312	543.437	1.055	.015	1.0086	1.0086
10	-61.507	3.329	-52.632	-1.125	.0018	556.7	.4695	528.18	17.378	544.076	1.055	.015	.9942	.9942
11	-61.652	2.875	-52.777	-1.125	.0035	563.7	.4759	535.31	17.445	544.721	1.055	.015	.9880	.9881
12	-61.793	2.432	-52.928	-1.134	.0043	570.7	.4822	542.41	17.514	545.374	1.056	.016	.9842	.9843
13	-61.930	2.066	-53.082	-1.152	.0051	577.7	.4885	549.58	17.588	546.034	1.056	.016	.9835	.9837
14	-62.061	1.813	-53.241	-1.180	.0052	584.8	.4947	556.54	17.663	546.704	1.057	.016	.9830	.9831
15	-62.185	1.692	-53.408	-1.223	.0085	591.8	.4998	562.32	17.729	547.384	1.058	.017	.9719	.9721
16	-62.305	1.636	-53.591	-1.287	.0150	598.9	.5038	567.01	17.785	548.076	1.059	.017	.9515	.9519
17	-62.428	1.768	-53.804	-1.377	.0212	606.1	.5078	571.62	17.844	548.784	1.060	.018	.9324	.9330
18	-62.563	1.829	-54.059	-1.495	.0242	613.3	.5125	577.13	17.914	549.507	1.061	.018	.9231	.9236
19	-62.714	1.835	-54.353	-1.639	.0272	620.7	.5174	582.61	17.986	550.248	1.061	.019	.9136	.9143
20	-62.880	1.746	-64.682	-1.802	.0305	628.1	.5221	588.06	18.059	551.009	1.062	.019	.9034	.9043
21	-63.056	1.554	-55.036	1.980	.0341	635.7	.5268	593.53	18.133	551.791	1.063	.020	.8924	.8933

STATION 5 INTEGRATED PERFORMANCE PRESSURE RATIO = 1.057 ISEN. EFF.= .970 POLY. EFF.= .970 DELTA T ON T = .016

STATION 6 FLOW FIELD DESCRIPTION

STREAM-LINE	RADIUS	VELOCITIES MERID	VELOCITIES TANGEN	VELOCITIES TOTAL	TEMPERATURES TOTAL	TEMPERATURES STATIC	PRESSURES TOTAL	PRESSURES STATIC	MACH NO	ANGLES WHIRL	ANGLES SLOPE	RADIUS OF CURVATURE	SPECIFIC WEIGHT
1	7.0784	237.61	143.16	277.53	530.505	524.192	15.932	15.276	.2461	31.05	27.37	4.302	.0778
2	7.1764	243.65	140.28	281.17	530.427	523.949	15.921	15.248	.2493	29.93	25.17	6.150	.0776
3	7.2723	248.75	138.06	284.43	530.395	523.763	15.915	15.226	.2523	29.03	22.95	9.719	.0776
4	7.3636	252.92	136.26	287.28	530.388	523.625	15.911	15.210	.2548	28.31	20.72	19.155	.0775
5	7.4539	256.33	134.34	289.63	530.408	523.533	15.911	15.198	.2570	27.74	18.50	106.796	.0775
6	7.5428	259.40	133.90	291.92	530.466	523.483	15.915	15.191	.2590	27.30	16.30	-37.731	.0774
7	7.6304	262.02	133.61	294.12	530.577	523.489	15.923	15.188	.2609	27.02	14.16	-17.919	.0774
8	7.7170	264.31	133.68	296.19	530.718	523.529	15.934	15.189	.2627	26.83	12.07	-12.781	.0774
9	7.8031	266.14	134.08	298.01	530.888	523.611	15.948	15.193	.2643	26.74	10.03	-10.442	.0774
10	7.8888	257.20	135.29	299.50	531.134	523.784	15.963	15.200	.2658	26.85	8.05	-9.284	.0774
11	7.9746	258.01	136.64	300.83	531.394	523.979	15.980	15.210	.2667	27.01	6.13	-8.675	.0774
12	8.0604	268.83	137.74	302.06	531.634	524.158	15.998	15.221	.2678	27.13	4.27	-8.415	.0775
13	8.1465	269.80	138.37	303.21	531.832	524.299	16.018	15.234	.2688	27.15	2.47	-8.426	.0775
14	8.2328	270.61	139.00	304.22	532.033	524.449	16.037	15.248	.2696	27.19	.72	-8.689	.0776
15	8.3196	270.17	141.47	304.97	532.413	524.792	16.056	15.263	.2702	27.64	-.97	-9.233	.0776
16	8.4075	268.50	145.65	305.45	532.968	525.323	16.074	15.278	.2705	28.48	-2.56	-10.159	.0776
17	8.4968	266.55	149.65	305.69	533.516	525.859	16.091	15.294	.2706	29.31	-4.06	-11.710	.0776
18	8.5875	265.31	151.59	305.56	533.868	526.218	16.106	15.309	.2704	29.74	-5.47	-14.466	.0776
19	8.6794	263.70	153.34	305.04	534.207	526.583	16.118	15.324	.2698	30.18	-6.82	-20.179	.0776
20	8.7728	261.79	154.97	304.22	534.541	526.958	16.127	15.338	.2690	30.62	-8.12	-37.835	.0777
21	8.8579	259.65	156.56	303.20	534.877	527.345	16.134	15.349	.2680	31.09	-9.38	1665.883	.0777

BLADE DATA

LOCAT -ION	BLADE-ANGLES SECTION	BLADE-ANGLES LEAN	REL FLOW ANGLE	DEVIATION INCIDENCE	LOSS COEFF	BLADE SPEED	RELATIVE MACH NO	RELATIVE VELOCITY	RELATIVE PRESSURE	RELATIVE TEMPERATURE	PRESSURE RATIO	DELTA T ON T	ISENTROPIC EFFICIENCY	POLYTROPIC EFFICIENCY
1	-54.590	3.782	-56.587	-1.997	-.0123	503.6	.3829	431.86	16.899	539.472	1.084	.023	1.0206	1.0204
2	-54.727	3.238	-56.655	-1.928	-.0105	510.6	.3931	443.32	16.960	540.051	1.083	.023	1.0182	1.0188
3	-54.887	2.445	-56.743	-1.857	-.0089	517.4	.4023	453.59	17.019	540.520	1.083	.023	1.0159	1.0157
4	-55.094	1.474	-56.880	-1.787	-.0075	523.9	.4106	462.89	17.079	541.160	1.083	.023	1.0138	1.0137
5	-55.327	.534	-57.049	-1.722	-.0063	530.4	.4181	471.35	17.138	541.735	1.083	.023	1.0119	1.0118
6	-55.553	-.180	-57.218	-1.665	-.0052	536.7	.4250	479.08	17.197	542.287	1.083	.023	1.0101	1.0100
7	-55.757	-.604	-57.375	-1.618	-.0036	542.9	.4311	485.99	17.254	542.539	1.083	.023	1.0078	1.0069
8	-55.951	-.805	-57.533	-1.581	-.0021	549.1	.4368	492.37	17.312	543.390	1.084	.023	1.0043	1.0042
9	-55.153	-.851	-57.708	-1.556	-.0004	555.2	.4419	498.18	17.370	543.944	1.085	.024	1.0008	1.0008
10	-55.362	-.814	-57.904	-1.542	.0037	561.3	.4460	502.88	17.420	544.502	1.086	.024	.9925	.9926
11	-55.571	-.774	-58.112	-1.541	.0075	567.4	.4499	507.34	17.472	545.065	1.087	.024	.9846	.9848
12	-56.778	-.800	-58.330	-1.552	.0093	573.5	.4539	512.03	17.529	545.537	1.089	.025	.9798	.9808
13	-55.983	-.845	-58.558	-1.576	.0101	579.6	.4585	517.22	17.593	546.215	1.090	.025	.9790	.9793
14	-57.183	-.796	-58.797	-1.614	.0103	585.8	.4630	522.34	17.658	546.801	1.091	.026	.9784	.9786
15	-57.374	-.546	-59.048	-1.673	.0172	592.0	.4654	525.30	17.702	547.397	1.093	.026	.9643	.9647
16	-57.560	-.108	-59.320	-1.760	.0300	598.2	.4560	525.22	17.726	548.307	1.094	.028	.9386	.9393
17	-57.750	.446	-59.632	-1.882	.0423	604.6	.4667	527.26	17.752	548.532	1.095	.029	.9145	.9156
18	-57.951	1.041	-59.995	-2.044	.0483	611.0	.4694	530.53	17.800	549.274	1.096	.029	.9025	.9038
19	-58.164	1.603	-60.402	-2.238	.0545	617.6	.4722	533.89	17.849	549.332	1.097	.030	.8982	.8916
20	-58.363	2.057	-60.842	-2.459	.0611	624.2	.4751	537.33	17.897	550.508	1.097	.031	.8778	.8786
21	-58.608	2.366	-61.308	-2.700	.0682	631.0	.4780	540.82	17.944	551.303	1.098	.031	.8625	.8643

STATION 6 INTEGRATED PERFORMANCE PRESSURE RATIO = 1.089 ISEN. EFF.= .961 POLY. EFF.= .961 DELTA T ON T = .026

STATION 7 FLOW FIELD DESCRIPTION

STREAM -LINE	RADIUS	VELOCITIES MERID	VELOCITIES TANGEN	VELOCITIES TOTAL	TEMPERATURES TOTAL	TEMPERATURES STATIC	PRESSURES TOTAL	PRESSURES STATIC	MACH NO	ANGLES WHIRL	ANGLES SLOPE	RADIUS OF CURVATURE	SPECIFIC WEIGHT
1	7.3120	313.28	200.15	371.75	535.753	524.429	16.507	15.313	.3295	32.57	26.61	-3.372	.0779
2	7.3819	314.18	199.57	372.20	535.866	524.516	16.514	15.317	.3299	32.42	23.72	-3.509	.0779
3	7.4512	315.14	199.58	373.02	536.029	524.628	16.527	15.324	.3306	32.35	20.99	-3.719	.0779
4	7.5200	315.94	199.74	373.78	536.202	524.755	16.542	15.333	.3312	32.30	18.40	-4.016	.0780
5	7.5886	316.44	199.74	374.21	536.363	524.889	16.555	15.344	.3315	32.26	15.95	-4.418	.0780
6	7.6574	316.70	199.62	374.36	536.511	525.029	16.568	15.355	.3316	32.22	13.63	-4.940	.0780
7	7.7264	316.65	199.63	374.35	536.674	525.192	16.580	15.366	.3316	32.23	11.42	-5.596	.0781
8	7.7958	316.70	199.64	374.37	536.836	525.353	16.592	15.378	.3315	32.23	9.34	-6.411	.0781
9	7.8658	316.65	199.84	374.45	537.017	525.529	16.605	15.390	.3315	32.26	7.36	-7.432	.0781
10	7.9355	315.88	200.94	374.38	537.284	525.801	16.617	15.402	.3314	32.46	5.48	-8.739	.0782
11	8.0092	315.11	201.99	374.29	537.549	526.071	16.629	15.414	.3312	32.66	3.70	-10.445	.0782
12	8.0807	314.68	202.41	374.16	537.760	526.290	16.641	15.427	.3310	32.75	2.00	-12.696	.0782
13	8.1542	314.77	201.96	373.93	537.891	526.431	16.653	15.439	.3306	32.69	.37	-15.649	.0782
14	8.2286	314.76	201.40	373.68	538.032	526.572	16.664	15.452	.3305	32.61	-1.19	-19.457	.0783
15	8.3042	312.50	203.47	372.90	538.390	526.998	16.672	15.465	.3297	33.07	-2.68	-24.246	.0783
16	8.3818	308.04	208.17	371.79	539.033	527.709	16.678	15.478	.3285	34.05	-4.07	-30.186	.0783
17	8.4616	303.33	212.89	370.63	539.692	528.438	16.684	15.493	.3273	35.06	-5.34	-37.877	.0782
18	8.5436	300.54	214.92	369.47	540.097	528.914	16.693	15.510	.3261	35.57	-6.50	-49.187	.0782
19	8.6275	297.35	217.05	368.14	540.523	529.420	16.702	15.527	.3248	36.13	-7.56	-69.311	.0783
20	8.7136	293.83	219.44	366.72	540.982	529.965	16.711	15.545	.3233	36.75	-8.52	-125.601	.0783
21	8.8019	289.95	222.19	365.32	541.491	530.558	16.721	15.564	.3219	37.46	-9.37	*955675.344	.0783

BLADE DATA

LOCAT -ION	BLADE-ANGLES SECTION	LEAN	REL FLOW ANGLE	DEVIATION INCIDENCE	LOSS COEFF	BLADE SPEED	RELATIVE MACH NO	RELATIVE VELOCITY	RELATIVE PRESSURE	RELATIVE TEMPERATURE	PRESSURE RATIO	DELTA T ON T	ISENTROPIC EFFICIENCY	POLYTROPIC EFFICIENCY
1	-42.577	-5.962	-45.519	-3.042	-.0183	520.3	.3970	447.91	17.067	540.366	1.123	.033	1.0219	1.0215
2	-43.113	-5.844	-46.029	-2.916	-.0160	525.2	.4010	452.52	17.109	541.292	1.124	.033	1.0190	1.0187
3	-43.579	-5.692	-46.371	-2.791	-.0134	530.2	.4047	456.73	17.152	541.718	1.125	.033	1.0163	1.0161
4	-44.033	-5.481	-46.705	-2.672	-.0113	535.1	.4082	460.72	17.195	542.145	1.126	.034	1.0140	1.0138
5	-44.510	-5.131	-47.073	-2.563	-.0095	540.0	.4116	464.62	17.239	542.575	1.127	.034	1.0120	1.0118
6	-45.000	-4.816	-47.467	-2.467	-.0078	544.8	.4150	468.49	17.284	543.010	1.127	.034	1.0101	1.0099
7	-45.454	-4.349	-47.871	-2.337	-.0053	549.8	.4181	472.09	17.327	543.450	1.128	.035	1.0070	1.0069
8	-45.943	-3.735	-48.268	-2.325	-.0032	554.7	.4213	475.77	17.372	543.897	1.129	.035	1.0043	1.0042
9	-46.370	-3.156	-48.651	-2.281	-.0005	559.7	.4244	479.33	17.416	544.351	1.130	.035	1.0008	1.0008
10	-46.772	-2.528	-49.030	-2.257	.0055	564.7	.4264	481.77	17.450	544.815	1.131	.036	.9924	.9925
11	-47.160	-1.975	-49.417	-2.253	.0112	569.8	.4285	484.33	17.486	545.288	1.132	.036	.9843	.9846
12	-47.545	-1.550	-49.81[illegible]	-2.269	.0147	575.0	.4315	487.67	17.529	545.772	1.132	.037	.9792	.9796
13	-47.928	-1.202	-50.232	-2.305	.0151	580.2	.4353	492.07	17.583	546.267	1.133	.037	.9782	.9786
14	-48.302	-.843	-50.665	-2.363	.0155	585.5	.4392	496.58	17.638	546.772	1.134	.037	.9773	.9777
15	-48.656	-.334	-51.109	-2.452	.0257	590.9	.4401	497.72	17.661	547.291	1.134	.038	.9622	.9625
16	-48.987	.198	-51.508	-2.581	.0450	596.4	.4379	495.58	17.654	547.827	1.135	.039	.9344	.9356
17	-49.299	.862	-52.061	-2.762	.0635	602.1	.4357	493.46	17.649	548.384	1.135	.040	.9081	.9097
18	-49.593	1.554	-52.593	-2.999	.0725	607.3	.4366	494.73	17.677	548.962	1.136	.041	.8947	.8965
19	-49.870	2.209	-53.154	-3.284	.0819	613.9	.4374	495.86	17.705	549.560	1.136	.042	.8889	.8830
20	-50.131	2.747	-53.738	-3.608	.0917	620.0	.4380	495.77	17.731	550.179	1.137	.043	.8664	.8688
21	-50.376	3.083	-54.336	-3.960	.1023	626.3	.4383	497.36	17.7[illegible]	550.820	1.138	.044	.8509	.8536

STATION 7 INTEGRATED PERFORMANCE PRESSURE RATIO = 1.132 ISEN. EFF.= .959 POLY. EFF.= .960 DELTA T ON T = .037

STATION 8 FLOW FIELD DESCRIPTION

STREAM -LINE	RADIUS	VELOCITIES MERID	VELOCITIES TANGEN	VELOCITIES TOTAL	TEMPERATURES TOTAL	TEMPERATURES STATIC	PRESSURES TOTAL	PRESSURES STATIC	MACH NO	ANGLES WHIRL	ANGLES SLOPE	RADIUS OF CURVATURE	SPECIFIC WEIGHT
1	7.4732	388.30	302.04	491.94	545.026	525.200	17.547	15.404	.4357	37.88	16.56	-1.883	.0783
2	7.5280	381.95	301.93	486.88	545.188	525.763	17.558	15.457	.4319	38.33	14.94	-2.255	.0784
3	7.5782	376.60	301.65	482.67	545.340	526.254	17.569	15.501	.4271	38.68	13.41	-2.749	.0786
4	7.6297	372.73	301.14	479.18	545.475	526.566	17.578	15.539	.4235	38.94	11.97	-3.420	.0787
5	7.6826	369.59	300.40	476.27	545.595	527.013	17.587	15.570	.4211	39.10	10.58	-4.374	.0788
6	7.7367	367.18	299.40	473.77	545.694	527.307	17.593	15.596	.4188	39.19	9.23	-5.822	.0789
7	7.7920	365.05	298.32	471.44	545.790	527.583	17.596	15.618	.4166	39.26	7.92	-8.248	.0790
8	7.8486	363.45	296.89	469.30	545.856	527.814	17.596	15.635	.4146	39.24	6.64	-13.036	.0790
9	7.9064	362.09	295.33	467.25	545.912	528.027	17.593	15.649	.4127	39.20	5.36	-26.332	.0791
10	7.9656	359.77	294.57	464.98	546.045	528.334	17.584	15.660	.4105	39.31	4.10	-191.142	.0791
11	8.0263	357.85	293.70	462.95	546.172	528.615	17.575	15.668	.4087	39.36	2.84	46.743	.0791
12	8.0884	357.03	292.24	461.38	546.247	528.809	17.568	15.674	.4072	39.30	1.58	23.458	.0791
13	8.1517	357.53	289.87	460.28	546.237	528.883	17.563	15.679	.4062	39.03	.33	16.698	.0791
14	8.2151	358.15	287.36	459.19	546.215	528.942	17.558	15.682	.4053	38.74	-.93	13.517	.0791
15	8.2822	354.95	287.76	456.97	546.476	529.371	17.540	15.685	.4031	39.03	-2.19	11.894	.0791
16	8.3506	347.90	291.15	453.65	547.033	530.175	17.513	15.688	.3999	39.93	-3.44	11.290	.0789
17	8.4221	340.49	294.49	450.18	547.604	531.004	17.485	15.692	.3965	40.86	-4.65	11.600	.0788
18	8.4963	336.41	294.72	447.25	547.882	531.495	17.467	15.699	.3936	41.22	-5.85	13.044	.0788
19	8.5732	332.00	295.57	444.51	548.231	532.045	17.453	15.708	.3912	41.68	-7.04	16.878	.0788
20	8.6530	327.15	297.41	442.13	548.691	532.679	17.447	15.722	.3888	42.27	-8.22	29.725	.0787
21	8.7359	321.50	300.38	439.99	549.281	533.424	17.449	15.741	.3867	43.06	-9.37	*816564.766	.0787

BLADE DATA

LOCAT -ION	BLADE-ANGLES SECTION	LEAN	REL FLOW ANGLE	DEVIATION INCIDENCE	LOSS COEFF	BLADE SPEED	RELATIVE MACH NO	RELATIVE VELOCITY	RELATIVE PRESSURE	RELATIVE TEMPERATURE	PRESSURE RATIO	DELTA T ON T	ISENTROPIC EFFICIENCY	POLYTROPIC EFFICIENCY
1	-25.429	-6.276	-30.653	-5.224	-.0251	532.2	.3998	451.37	17.195	541.591	1.194	.051	1.0190	1.0185
2	-25.461	-5.836	-31.461	-5.000	-.0212	535.6	.3964	447.78	17.222	542.195	1.195	.051	1.0165	1.0161
3	-27.447	-5.355	-32.230	-4.783	-.0173	539.2	.3941	445.44	17.250	542.510	1.195	.051	1.0142	1.0139
4	-28.386	-4.638	-32.965	-4.579	-.0149	542.9	.3929	444.25	17.281	542.835	1.196	.052	1.0123	1.0128
5	-29.279	-3.950	-33.673	-4.394	-.0125	546.6	.3927	444.10	17.313	543.170	1.197	.052	1.0106	1.0103
6	-30.130	-3.151	-34.365	-4.235	-.0103	550.5	.3932	444.82	17.347	543.516	1.197	.052	1.0089	1.0087
7	-30.948	-2.346	-35.052	-4.103	-.0071	554.4	.3941	445.92	17.379	543.872	1.197	.052	1.0063	1.0061
8	-31.739	-1.530	-35.740	-4.001	-.0042	558.4	.3955	447.78	17.413	544.239	1.197	.052	1.0038	1.0037
9	-32.498	-.865	-36.429	-3.931	-.0008	562.5	.3975	450.03	17.447	544.517	1.197	.052	1.0008	1.0007
10	-33.218	-.216	-37.111	-3.893	.0073	566.8	.3984	451.14	17.467	545.007	1.197	.053	.9938	.9932
11	-33.592	.351	-37.731	-3.889	.0157	571.1	.3997	452.77	17.488	545.409	1.196	.053	.9854	.9858
12	-34.511	.824	-38.429	-3.918	.0195	575.5	.4023	455.75	17.520	545.524	1.195	.053	.9805	.9818
13	-35.079	1.214	-39.060	-3.981	.0202	580.0	.4064	460.44	17.565	546.250	1.195	.053	.9794	.9800
14	-35.607	1.547	-39.690	-4.063	.0207	584.6	.4108	465.43	17.611	546.[illegible]87	1.195	.053	.9784	.9798
15	-35.108	1.854	-40.345	-4.237	.0343	589.3	.4109	465.73	17.615	547.139	1.194	.054	.9636	.9645
16	-35.595	2.166	-41.056	-4.461	.0600	594.2	.4067	461.36	17.578	547.511	1.192	.055	.9361	.9377
17	-37.055	2.479	-41.830	-4.776	.0848	599.3	.4025	456.95	17.542	548.108	1.190	.056	.9093	.9115
18	-37.456	2.775	-42.643	-5.187	.0968	604.5	.4027	457.34	17.551	548.529	1.189	.056	.8958	.8976
19	-37.764	3.032	-43.443	-5.679	.1092	610.0	.4024	457.27	17.559	549.173	1.188	.057	.8803	.8832
20	-37.976	3.230	-44.212	-6.237	.1223	615.7	.4014	456.42	17.565	549.743	1.187	.058	.8658	.8683
21	-38.132	3.347	-44.973	-6.841	.1365	621.5	.3994	454.46	17.567	550.340	1.187	.059	.8430	.8525

STATION 8 INTEGRATED PERFORMANCE PRESSURE RATIO = 1.194 ISEN. EFF.= .961 POLY. EFF = .962 DELTA T ON T = .054

STATION 9 FLOW FIELD DESCRIPTION

STREAM -LINE	RADIUS	VELOCITIES MERID	TANGEN	TOTAL	TEMPERATURES TOTAL	STATIC	PRESSURES TOTAL	STATIC	MACH NO	ANGLES WHIRL	SLOPE	RADIUS OF CURVATURE	SPECIFIC WEIGHT
1	7.5499	404.23	348.27	533.61	549.342	526.017	18.054	15.500	.4722	40.74	8.54	-5.825	.0786
2	7.5954	400.85	347.26	530.35	549.437	526.395	18.056	15.532	.4692	40.90	8.24	-6.874	.0787
3	7.6420	397.97	346.13	527.43	549.525	526.735	18.058	15.560	.4665	41.01	7.86	-8.317	.0788
4	7.6895	395.53	344.86	524.76	549.603	527.045	18.059	15.586	.4640	41.08	7.42	-9.221	.0789
5	7.7380	393.45	343.47	522.23	549.673	527.328	18.061	15.610	.4616	41.12	6.90	-10.496	.0790
6	7.7874	391.64	342.05	519.93	549.742	527.594	18.063	15.632	.4595	41.13	6.33	-11.908	.0791
7	7.8377	389.77	341.14	517.97	549.859	527.882	18.066	15.653	.4576	41.19	5.71	-13.576	.0791
8	7.8839	388.14	340.12	516.03	549.969	528.153	18.069	15.673	.4558	41.23	5.04	-15.713	.0792
9	7.9409	386.50	339.36	514.34	550.105	528.435	18.073	15.692	.4542	41.28	4.32	-18.745	.0792
10	7.9939	383.75	340.53	513.05	550.423	528.562	18.079	15.710	.4528	41.59	3.56	-23.674	.0793
11	8.0479	381.20	341.62	511.87	550.740	529.275	18.085	15.727	.4516	41.87	2.74	-33.441	.0793
12	8.1029	378.97	340.55	509.50	550.858	529.595	18.079	15.743	.4494	41.94	1.88	-61.068	.0793
13	8.1588	377.07	336.33	505.27	550.678	529.767	18.054	15.757	.4456	41.73	.99	-454.912	.0794
14	8.2156	375.37	332.06	501.16	550.492	529.919	18.023	15.769	.4419	41.50	.06	80.107	.0794
15	8.2730	358.92	331.89	496.24	550.700	530.530	17.992	15.780	.4373	41.97	-.91	36.218	.0794
16	8.3337	357.50	335.60	490.35	551.294	531.600	17.944	15.790	.4317	43.19	-1.95	23.689	.0792
17	8.3965	345.67	339.22	484.32	551.893	532.681	17.895	15.799	.4259	44.46	-3.07	18.254	.0791
18	8.4616	339.61	339.94	480.51	552.221	533.310	17.868	15.808	.4223	45.03	-4.28	15.295	.0791
19	8.5287	333.07	340.76	476.50	552.568	533.972	17.839	15.817	.4186	45.65	-5.62	13.532	.0790
20	8.5980	325.63	341.78	472.07	552.945	534.694	17.808	15.826	.4144	46.39	-7.13	13.395	.0790
21	8.6699	316.44	343.11	466.75	553.366	535.524	17.772	15.838	.4094	47.32	-8.95	20.749	.0789

BLADE DATA

LOCAT -ION	BLADE-ANGLES SECTION	LEAN	REL FLOW ANGLE	DEVIATION INCIDENCE	LOSS COEFF	BLADE SPEED	RELATIVE MACH NO	RELATIVE VELOCITY	RELATIVE PRESSURE	RELATIVE TEMPERATURE	PRESSURE RATIO	DELTA T ON T	ISENTROPIC EFFICIENCY	POLYTROPIC EFFICIENCY
1	-11.816	2.399	-25.047	-13.230	-.0309	537.2	.3949	446.26	17.256	542.332	1.228	.059	1.0202	1.0198
2	-12.965	2.648	-25.730	-12.764	-.0261	540.4	.3937	444.98	17.280	542.518	1.229	.059	1.0176	1.0171
3	-14.127	2.944	-26.407	-12.289	-.0220	543.7	.3930	444.33	17.305	542.912	1.229	.059	1.0153	1.0149
4	-15.273	3.256	-27.085	-11.806	-.0185	547.1	.3928	444.25	17.332	543.214	1.229	.060	1.0132	1.0129
5	-16.392	3.539	-27.762	-11.370	-.0155	550.5	.3930	444.64	17.361	543.525	1.229	.060	1.0115	1.0111
6	-17.440	3.913	-28.432	-10.992	-.0129	554.1	.3935	445.36	17.391	543.843	1.229	.060	1.0097	1.0094
7	-18.398	4.185	-29.054	-10.656	-.0085	557.7	.3939	445.88	17.417	544.168	1.229	.060	1.0068	1.0066
8	-19.262	4.409	-29.573	-10.416	-.0053	561.3	.3946	446.74	17.446	544.502	1.230	.060	1.0042	1.0041
9	-20.041	4.589	-30.278	-10.237	-.0010	565.0	.3952	447.56	17.473	544.844	1.230	.061	1.0008	1.0008
10	-20.750	4.730	-30.745	-9.995	.0092	568.8	.3941	446.50	17.482	545.194	1.230	.061	.9924	.9927
11	-21.401	4.835	-31.216	-9.815	.0187	572.6	.3933	445.73	17.493	545.553	1.231	.062	.9843	.9847
12	-22.006	4.913	-31.911	-9.905	.0245	576.5	.3938	446.44	17.516	545.921	1.230	.062	.9790	.9795
13	-22.567	4.955	-32.927	-10.361	.0252	580.5	.3962	449.23	17.554	546.298	1.228	.062	.9777	.9783
14	-23.078	4.955	-33.927	-10.850	.0258	584.5	.3989	452.39	17.594	546.683	1.227	.061	.9765	.9772
15	-23.539	4.905	-34.841	-11.303	.0423	588.7	.3961	449.50	17.580	547.080	1.224	.062	.9602	.9613
16	-23.949	4.734	-35.749	-11.800	.0750	593.0	.3879	440.50	17.513	547.494	1.221	.063	.9299	.9319
17	-24.306	4.615	-36.758	-12.452	.1060	597.4	.3795	431.46	17.447	547.929	1.218	.064	.9003	.9030
18	-24.599	4.388	-37.663	-13.064	.1210	602.1	.3771	429.00	17.435	548.384	1.216	.065	.8845	.8876
19	-24.815	4.130	-38.621	-13.806	.1365	605.8	.3745	426.30	17.422	548.857	1.214	.065	.8680	.8716
20	-24.941	3.865	-39.663	-14.723	.1528	611.8	.3713	423.00	17.404	549.349	1.212	.066	.8584	.8544
21	-24.964	3.617	-40.865	-15.901	.1705	616.9	.3670	418.43	17.380	549.864	1.209	.067	.8311	.8356

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STATION 9 INTEGRATED PERFORMANCE PRESSURE RATIO = 1.225 ISEN. EFF.= .958 POLY. EFF.= .959 DELTA T ON T = .062

STATION 10 FLOW FIELD DESCRIPTION

STREAM -LINE	RADIUS	VELOCITIES MERID	VELOCITIES TANGEN	VELOCITIES TOTAL	TEMPERATURES TOTAL	TEMPERATURES STATIC	PRESSURES TOTAL	PRESSURES STATIC	MACH NO	ANGLES WHIRL	ANGLES SLOPE	RADIUS OF CURVATURE	SPECIFIC WEIGHT
1	7.5746	395.92	347.13	526.55	549.342	526.631	18.054	15.564	.4657	41.24	7.82	9.349	.0788
2	7.6236	397.75	345.97	527.17	549.437	526.572	18.056	15.560	.4663	41.02	7.71	10.666	.0788
3	7.6729	400.51	344.73	528.44	549.525	526.650	18.058	15.551	.4674	40.72	7.40	13.394	.0788
4	7.7222	403.67	343.40	529.99	549.503	526.595	18.059	15.539	.4688	40.39	6.95	17.138	.0787
5	7.7712	406.87	342.00	531.52	549.673	526.531	18.061	15.527	.4702	40.05	6.44	21.782	.0787
6	7.8201	409.81	340.62	532.89	549.742	526.480	18.063	15.516	.4714	39.73	5.87	27.297	.0787
7	7.8637	412.12	339.79	534.13	549.859	526.489	18.066	15.508	.4725	39.51	5.28	33.270	.0786
8	7.9174	414.05	338.90	535.09	549.969	526.515	18.069	15.503	.4733	39.30	4.67	38.347	.0786
9	7.9602	415.55	338.29	535.83	550.105	526.585	18.073	15.500	.4740	39.15	4.04	40.920	.0785
10	8.0153	415.97	339.62	536.69	550.423	526.929	18.079	15.499	.4746	39.26	3.41	40.195	.0785
11	8.0649	415.37	340.90	537.35	550.740	527.087	18.085	15.499	.4751	39.38	2.77	36.929	.0785
12	8.1150	414.98	340.04	536.50	550.858	527.280	18.079	15.502	.4742	39.33	2.11	32.618	.0784
13	8.1656	414.29	336.04	533.43	550.678	527.370	18.054	15.508	.4715	39.05	1.44	28.298	.0785
14	8.2170	413.06	332.00	529.95	550.492	527.487	18.029	15.516	.4684	38.79	.75	24.434	.0785
15	8.2695	406.80	332.05	525.11	550.700	528.113	17.992	15.529	.4638	39.22	.02	20.962	.0785
16	8.3239	395.23	336.00	518.75	551.294	529.292	17.944	15.546	.4577	40.37	-.77	17.710	.0784
17	8.3810	362.42	339.85	511.61	551.893	530.455	17.895	15.568	.4509	41.63	-1.65	14.564	.0783
18	8.4409	374.02	340.77	505.98	552.221	531.252	17.868	15.595	.4456	42.34	-2.63	11.524	.0783
19	8.5037	364.77	341.76	499.85	552.568	532.104	17.839	15.623	.4398	43.13	-3.70	8.543	.0783
20	8.5700	355.15	342.89	493.67	552.945	532.984	17.808	15.649	.4340	43.99	-4.87	5.621	.0783
21	8.6399	346.64	344.30	488.57	553.366	533.815	17.772	15.661	.4292	44.81	-6.12	3.053	.0783

STATION 11   FLOW FIELD DESCRIPTION

STREAM -LINE	RADIUS	VELOCITIES MERID	VELOCITIES TANGEN	VELOCITIES TOTAL	TEMPERATURES TOTAL	TEMPERATURES STATIC	PRESSURES TOTAL	PRESSURES STATIC	MACH NO	ANGLES WHIRL	ANGLES SLOPE	RADIUS OF CURVATURE	SPECIFIC WEIGHT
1	7.6199	408.35	345.07	534.63	549.342	525.928	18.054	15.491	.4732	40.20	9.06	26.367	.0786
2	7.6779	428.39	343.52	549.11	549.437	524.738	18.056	15.350	.4865	38.73	8.46	-229.076	.0781
3	7.7319	446.11	342.10	562.18	549.525	523.635	18.058	15.240	.4986	37.48	7.71	-31.476	.0777
4	7.7821	460.18	340.75	572.61	549.603	522.744	18.059	15.143	.5083	36.52	6.93	-20.209	.0773
5	7.8296	470.82	339.45	580.43	549.673	522.074	18.061	15.070	.5156	35.79	6.16	-16.649	.0770
6	7.8753	473.75	338.23	586.19	549.742	521.593	18.063	15.016	.5210	35.24	5.44	-15.477	.0768
7	7.9199	484.43	337.60	590.46	549.859	521.298	18.066	14.978	.5249	34.87	4.78	-15.607	.0767
8	7.9638	488.45	336.92	593.39	549.969	521.124	18.069	14.952	.5276	34.60	4.18	-16.764	.0766
9	8.0073	490.95	336.55	595.23	550.105	521.081	18.073	14.938	.5292	34.43	3.63	-19.031	.0765
10	8.0509	491.28	333.12	596.33	550.423	521.285	18.079	14.933	.5302	34.54	3.13	-22.766	.0764
11	8.0947	490.57	339.64	596.67	550.740	521.575	18.085	14.937	.5303	34.70	2.65	-29.038	.0764
12	8.1388	488.89	339.05	594.95	550.858	521.561	18.079	14.950	.5286	34.74	2.19	-41.343	.0764
13	8.1835	486.25	335.31	590.66	550.678	522.095	18.054	14.970	.5247	34.59	1.73	-76.497	.0765
14	8.2288	482.62	331.53	585.52	550.492	522.405	18.029	14.998	.5200	34.49	1.28	-799.220	.0766
15	8.2752	474.12	331.83	578.71	550.700	523.266	17.992	15.034	.5135	34.99	.78	97.692	.0767
16	8.3234	460.23	335.03	569.85	551.294	524.694	17.944	15.081	.5049	36.13	.22	50.321	.0767
17	8.3741	443.78	340.13	559.13	551.893	526.285	17.895	15.143	.4947	37.47	-.47	37.987	.0768
18	8.4278	428.74	341.30	548.00	552.221	527.623	17.868	15.224	.4842	38.52	-1.28	35.199	.0770
19	8.4855	409.40	342.49	533.77	552.568	529.232	17.839	15.329	.4710	39.91	-2.20	42.780	.0773
20	8.5489	384.79	343.74	515.96	552.945	531.140	17.808	15.459	.4544	41.77	-3.23	197.830	.0777
21	8.6199	355.15	345.10	495.21	553.366	533.282	17.772	15.606	.4353	44.18	-4.27	-27.461	.0781

BLADE DATA

LOCAT -ION	BLADE-ANGLES SECTION	BLADE-ANGLES LEAN	REL FLOW ANGLE	DEVIATION INCIDENCE	LOSS COEFF	BLADE SPEED	RELATIVE MACH NO	RELATIVE VELOCITY	RELATIVE PRESSURE	RELATIVE TEMPERATURE	PRESSURE RATIO	DELTA T ON T	ISENTROPIC EFFICIENCY	POLYTROPIC EFFICIENCY
1	48.817	-39.941	40.139	-8.619	0.0000	0.0	.4732	534.63	18.054	549.342	1.228	.059	1.0202	1.0196
2	48.042	-36.697	38.727	-9.315	0.0000	0.0	.4865	549.11	18.056	549.437	1.229	.059	1.0176	1.0171
3	47.337	-33.289	37.483	-9.854	0.0000	0.0	.4986	562.18	18.058	549.525	1.229	.059	1.0153	1.0149
4	46.827	-29.837	36.519	-10.308	0.0000	0.0	.5083	572.61	18.059	549.603	1.229	.060	1.0132	1.0129
5	46.421	-26.387	35.791	-10.630	0.0000	0.0	.5156	580.43	18.061	549.673	1.229	.060	1.0115	1.0111
6	46.074	-22.991	35.240	-10.834	0.0000	0.0	.5210	586.19	18.063	549.742	1.229	.060	1.0097	1.0094
7	45.749	-19.697	34.873	-10.876	0.0000	0.0	.5249	590.46	18.066	549.859	1.229	.060	1.0068	1.0066
8	45.433	-16.429	34.597	-10.837	0.0000	0.0	.5275	593.39	18.069	549.969	1.230	.060	1.0042	1.0041
9	45.141	-12.986	34.431	-10.710	0.0000	0.0	.5292	595.23	18.073	550.105	1.230	.061	1.0008	1.0008
10	44.887	-9.196	34.537	-10.350	0.0000	0.0	.5302	596.39	18.079	550.423	1.230	.061	.9924	.9927
11	44.698	-5.202	34.697	-10.002	0.0000	0.0	.5303	596.67	18.085	550.740	1.231	.062	.9843	.9847
12	44.602	-1.356	34.742	-9.860	0.0000	0.0	.5286	594.95	18.079	550.858	1.230	.062	.9790	.9796
13	44.610	2.081	34.590	-10.020	0.0000	0.0	.5247	590.66	18.054	550.678	1.228	.062	.9777	.9783
14	44.690	5.549	34.487	-10.203	0.0000	0.0	.5200	585.52	18.029	550.492	1.227	.061	.9765	.9772
15	44.800	10.024	34.987	-9.813	0.0000	0.0	.5135	578.71	17.992	550.700	1.224	.052	.9602	.9613
16	44.946	16.049	36.134	-8.812	0.0000	0.0	.5049	569.85	17.944	551.294	1.221	.063	.9299	.9319
17	45.289	23.193	37.468	-7.821	0.0000	0.0	.4947	559.13	17.895	551.893	1.218	.064	.9003	.9038
18	46.034	30.509	38.522	-7.512	0.0000	0.0	.4842	548.00	17.868	552.221	1.216	.065	.8845	.8876
19	47.229	37.214	39.915	-7.314	0.0000	0.0	.4710	533.77	17.839	552.568	1.214	.065	.8680	.8716
20	48.817	42.734	41.775	-7.043	0.0000	0.0	.4544	515.96	17.808	552.345	1.212	.066	.8504	.8544
21	50.814	46.652	44.178	-6.636	0.0000	0.0	.4353	495.21	17.772	553.366	1.209	.067	.8311	.8356

STATION 11   INTEGRATED PERFORMANCE   PRESSURE RATIO = 1.225   ISEN. EFF.= .958   POLY. EFF.= .959   DELTA T ON T = .062

STATION 12 FLOW FIELD DESCRIPTION

STREAM -LINE	RADIUS	------VELOCITIES------- MERID	TANGEN	TOTAL	--TEMPERATURES-- TOTAL	STATIC	---PRESSURES--- TOTAL	STATIC	MACH NO	---ANGLES--- WHIRL	SLOPE	RADIUS OF CURVATURE	SPECIFIC WEIGHT
1	7.7150	602.92	358.07	717.34	549.342	507.179	17.997	13.593	.6465	32.81	5.21	-3.688	.0715
2	7.7545	600.55	384.23	712.95	549.437	507.789	17.998	13.644	.6421	32.61	4.36	-3.701	.0717
3	7.7937	598.21	379.00	708.17	549.525	508.434	17.999	13.697	.6374	32.36	3.56	-3.791	.0719
4	7.8327	595.73	373.35	703.10	549.603	509.098	17.999	13.753	.6324	32.07	2.85	-3.971	.0721
5	7.8717	593.02	367.92	697.83	549.673	509.765	17.997	13.809	.6273	31.82	2.24	-4.245	.0723
6	7.9107	589.67	363.06	692.43	549.742	510.452	17.992	13.865	.6221	31.62	1.75	-4.612	.0725
7	7.9499	586.21	358.34	687.32	549.359	511.153	17.988	13.918	.6170	31.47	1.37	-5.082	.0726
8	7.9895	582.89	354.83	682.39	549.969	511.817	17.983	13.968	.6122	31.33	1.10	-5.673	.0728
9	8.0235	580.09	351.11	678.03	550.105	512.434	17.982	14.015	.6079	31.19	.93	-6.432	.0730
10	8.0701	577.99	347.99	674.66	550.423	513.132	17.987	14.057	.6045	31.05	.81	-7.455	.0731
11	8.1113	576.04	345.42	671.67	550.740	513.779	17.992	14.095	.6014	30.95	.74	-8.918	.0732
12	8.1531	573.43	343.15	668.32	550.858	514.265	17.988	14.128	.5981	30.89	.70	-11.141	.0733
13	8.1956	570.11	341.08	664.35	550.678	514.518	17.973	14.157	.5944	30.89	.68	-14.820	.0734
14	8.2397	566.83	339.64	660.79	550.492	514.719	17.958	14.181	.5911	30.93	.67	-22.022	.0735
15	8.2826	563.41	333.54	657.30	550.700	515.304	17.935	14.201	.5877	31.00	.63	-44.477	.0735
16	8.3273	558.51	337.49	652.56	551.294	516.403	17.886	14.215	.5823	31.14	.53	287.216	.0734
17	8.3732	553.01	339.08	648.16	551.893	517.475	17.834	14.222	.5783	31.44	.35	29.586	.0733
18	8.4203	547.68	341.74	645.72	552.221	518.053	17.797	14.220	.5758	31.95	.04	14.857	.0732
19	8.4633	542.85	347.97	644.31	552.568	518.507	17.766	14.206	.5747	32.66	-.42	9.802	.0731
20	8.5196	537.75	356.22	645.03	552.945	518.861	17.733	14.180	.5747	33.52	-1.11	7.331	.0729
21	8.5730	531.95	366.36	645.92	553.366	519.189	17.696	14.144	.5754	34.56	-2.03	5.947	.0727

BLADE DATA

LOCAT -ION	BLADE-ANGLES SECTION	LEAN	REL FLOW ANGLE	DEVIATION INCIDENCE	LOSS COEFF	BLADE SPEED	RELATIVE MACH NO	RELATIVE VELOCITY	RELATIVE PRESSURE	RELATIVE TEMPERATURE	PRESSURE RATIO	DELTA T ON T	ISENTROPIC EFFICIENCY	POLYTROPIC EFFICIENCY
1	31.959	-24.547	32.808	.849	.0221	0.0	.6465	717.34	17.997	549.342	1.225	.059	1.0041	1.0040
2	31.757	-23.332	32.611	.855	.0213	0.0	.6421	712.95	17.998	549.437	1.225	.059	1.0015	1.0014
3	31.491	-21.335	32.357	.865	.0208	0.0	.6374	708.17	17.999	549.525	1.225	.059	.9988	.9989
4	31.193	-19.043	32.074	.881	.0203	0.0	.6324	703.10	17.999	549.603	1.225	.060	.9962	.9963
5	30.915	-15.679	31.916	.901	.0215	0.0	.6273	697.88	17.997	549.573	1.225	.060	.9935	.9936
6	30.698	-14.437	31.621	.923	.0233	0.0	.6221	692.48	17.992	549.742	1.224	.060	.9899	.9902
7	30.527	-12.317	31.472	.946	.0254	0.0	.6170	687.32	17.988	549.559	1.224	.060	.9850	.9854
8	30.363	-10.238	31.330	.967	.0277	0.0	.6122	682.39	17.983	549.369	1.224	.060	.9802	.9808
9	30.198	-8.122	31.195	.989	.0289	0.0	.6079	678.08	17.982	550.105	1.224	.061	.9758	.9765
10	30.044	-5.957	31.051	1.006	.0292	0.0	.6045	674.66	17.987	550.423	1.224	.061	.9673	.9682
11	29.925	-3.828	30.948	1.023	.0295	0.0	.6014	671.67	17.992	550.740	1.224	.062	.9591	.9603
12	29.858	-1.759	30.895	1.037	.0289	0.0	.5981	668.32	17.988	550.358	1.224	.062	.9546	.9559
13	29.844	.310	30.891	1.047	.0261	0.0	.5944	664.35	17.973	550.578	1.223	.062	.9558	.9571
14	29.875	2.552	30.930	1.054	.0231	0.0	.5911	660.79	17.958	550.492	1.222	.061	.9573	.9585
15	29.944	5.155	31.000	1.056	.0191	0.0	.5877	657.30	17.935	550.700	1.220	.062	.9448	.9464
16	30.089	8.211	31.143	1.054	.0201	0.0	.5828	652.56	17.886	551.294	1.217	.063	.9145	.9169
17	30.386	11.751	31.439	1.053	.0222	0.0	.5783	648.16	17.834	551.593	1.214	.064	.8842	.8873
18	30.900	15.769	31.954	1.054	.0267	0.0	.5758	645.72	17.797	552.221	1.211	.065	.8661	.8696
19	31.601	20.051	32.660	1.059	.0293	0.0	.5747	644.81	17.766	552.568	1.209	.065	.8498	.8530
20	32.455	24.258	33.522	1.067	.0319	0.0	.5747	645.03	17.733	552.345	1.207	.066	.8312	.8356
21	33.478	28.225	34.557	1.079	.0353	0.0	.5754	645.92	17.696	553.366	1.204	.067	.8118	.8166

STATION 12 INTEGRATED PERFORMANCE PRESSURE RATIO = 1.220 ISEN. EFF.= .938 POLY. EFF.= .939 DELTA T ON T = .062

STATION 13 FLOW FIELD DESCRIPTION

STREAM -LINE	RADIUS	------VELOCITIES------- MERID	TANGEN	TOTAL	--TEMPERATURES-- TOTAL	STATIC	---PRESSURES--- TOTAL	STATIC	MACH NO	---ANGLES--- WHIRL	SLOPE	RADIUS OF CURVATURE	SPECIFIC WEIGHT
1	7.7230	583.67	184.98	612.28	549.342	518.629	17.942	14.657	.5457	17.58	-2.23	-5.196	.0754
2	7.7570	575.37	181.80	603.41	549.437	519.609	17.940	14.744	.5373	17.54	-2.34	-5.885	.0757
3	7.7918	567.29	179.04	594.87	549.525	520.535	17.937	14.826	.5292	17.52	-2.42	-6.744	.0760
4	7.8276	559.49	176.58	586.69	549.603	521.405	17.934	14.903	.5215	17.52	-2.45	-7.811	.0763
5	7.8642	552.05	174.23	578.90	549.673	522.219	17.929	14.974	.5142	17.52	-2.43	-9.118	.0765
6	7.9019	544.62	171.62	571.21	549.742	523.013	17.918	15.038	.5070	17.48	-2.36	-10.690	.0767
7	7.9406	538.44	169.00	564.34	549.859	523.770	17.906	15.094	.5005	17.43	-2.23	-12.534	.0769
8	7.9805	532.87	166.55	558.32	549.969	524.433	17.895	15.141	.4949	17.37	-2.04	-14.624	.0770
9	8.0214	528.70	165.18	553.91	550.105	524.972	17.890	15.179	.4907	17.35	-1.81	-16.876	.0771
10	8.0633	526.05	164.65	551.22	550.423	525.534	17.895	15.208	.4880	17.38	-1.55	-19.110	.0772
11	8.1061	524.05	164.51	549.27	550.740	526.025	17.899	15.231	.4861	17.43	-1.28	-21.113	.0773
12	8.1497	522.16	164.28	547.40	550.858	526.313	17.898	15.248	.4843	17.46	-1.00	-22.717	.0773
13	8.1942	520.39	163.95	545.60	550.678	526.294	17.893	15.260	.4827	17.49	-.71	-23.830	.0774
14	8.2394	519.17	163.82	544.49	550.492	526.215	17.889	15.266	.4817	17.51	-.44	-24.495	.0774
15	8.2853	518.17	163.93	543.48	550.700	526.506	17.879	15.267	.4808	17.56	-.18	-24.938	.0774
16	8.3321	514.19	163.46	539.55	551.294	527.445	17.829	15.262	.4769	17.64	.07	-25.685	.0772
17	8.3799	510.17	163.68	535.78	551.893	528.380	17.772	15.250	.4731	17.79	.32	-27.627	.0770
18	8.4286	507.60	165.29	533.33	552.221	528.879	17.726	15.229	.4712	18.04	.56	-32.793	.0768
19	8.4782	507.03	168.44	534.23	552.568	529.187	17.692	15.197	.4714	18.38	.75	-48.698	.0766
20	8.5284	507.62	172.64	536.17	552.945	529.399	17.658	15.154	.4730	18.78	.87	-168.841	.0764
21	8.5795	506.98	177.54	539.05	553.366	529.565	17.622	15.099	.4755	19.23	.88	76.314	.0761

BLADE DATA

LOCAT -ION	BLADE-ANGLES SECTION	LEAN	REL FLOW ANGLE	DEVIATION INCIDENCE	LOSS COEFF	BLADE SPEED	RELATIVE MACH NO	RELATIVE VELOCITY	RELATIVE PRESSURE	RELATIVE TEMPERATURE	PRESSURE RATIO	DELTA T ON T	ISENTROPIC EFFICIENCY	POLYTROPIC EFFICIENCY
1	15.234	-9.414	17.585	1.351	.0435	0.0	.5457	612.28	17.942	549.342	1.221	.059	.9886	.9890
2	15.183	-8.921	17.535	1.353	.0429	0.0	.5373	603.41	17.940	549.437	1.221	.059	.9850	.9854
3	15.154	-8.360	17.516	1.362	.0427	0.0	.5292	594.87	17.937	549.525	1.221	.059	.9814	.9819
4	15.135	-7.722	17.516	1.382	.0431	0.0	.5215	586.69	17.934	549.603	1.220	.060	.9779	.9785
5	15.105	-6.932	17.516	1.410	.0447	0.0	.5142	578.90	17.929	549.673	1.220	.060	.9743	.9750
6	15.039	-6.155	17.485	1.446	.0477	0.0	.5070	571.21	17.918	549.742	1.219	.060	.9690	.9699
7	15.942	-5.228	17.426	1.484	.0513	0.0	.5005	564.34	17.906	549.359	1.218	.060	.9622	.9633
8	15.844	-4.250	17.367	1.523	.0561	0.0	.4949	558.32	17.895	549.969	1.218	.060	.9556	.9568
9	15.790	-3.269	17.350	1.560	.0583	0.0	.4907	553.91	17.890	550.105	1.217	.061	.9502	.9516
10	15.786	-2.337	17.380	1.594	.0587	0.0	.4880	551.22	17.895	550.423	1.218	.061	.9419	.9435
11	15.803	-1.500	17.428	1.624	.0592	0.0	.4861	549.27	17.899	550.740	1.218	.062	.9338	.9356
12	15.814	-.805	17.465	1.650	.0578	0.0	.4843	547.40	17.898	550.358	1.218	.062	.9381	.9321
13	15.817	-.215	17.487	1.671	.0521	0.0	.4827	545.60	17.893	550.578	1.218	.062	.9340	.9359
14	15.829	.391	17.512	1.684	.0461	0.0	.4817	544.40	17.889	550.492	1.217	.061	.9382	.9399
15	15.867	1.132	17.555	1.688	.0382	0.0	.4808	543.48	17.879	550.700	1.217	.062	.9295	.9314
16	15.951	2.033	17.637	1.686	.0403	0.0	.4769	539.55	17.829	551.294	1.213	.063	.8991	.9018
17	15.105	3.062	17.788	1.683	.0445	0.0	.4731	535.78	17.772	551.893	1.209	.064	.8680	.8715
18	16.353	4.198	18.036	1.683	.0537	0.0	.4712	533.83	17.726	552.221	1.206	.065	.8474	.8514
19	15.689	5.470	18.377	1.688	.0583	0.0	.4714	534.28	17.692	552.568	1.204	.065	.8298	.8342
20	17.084	6.922	18.783	1.699	.0635	0.0	.4730	536.17	17.658	552.945	1.202	.066	.8121	.8169
21	17.510	8.542	19.229	1.719	.0695	0.0	.4755	539.05	17.622	553.366	1.199	.067	.7929	.7982

STATION 13 INTEGRATED PERFORMANCE PRESSURE RATIO = 1.215 ISEN. EFF.= .918 POLY. EFF.= .920 DELTA T ON T = .062

STATION 14 FLOW FIELD DESCRIPTION

STREAM -LINE	RADIUS	VELOCITIES MERID	VELOCITIES TANGEN	VELOCITIES TOTAL	TEMPERATURES TOTAL	TEMPERATURES STATIC	PRESSURES TOTAL	PRESSURES STATIC	MACH NO	ANGLES WHIRL	ANGLES SLOPE	RADIUS OF CURVATURE	SPECIFIC WEIGHT
1	7.6720	480.75	52.08	483.53	549.342	530.186	17.887	15.789	.4263	6.18	-4.29	16.241	.0795
2	7.7102	479.87	50.90	482.56	549.437	530.363	17.881	15.792	.4253	6.05	-4.05	17.341	.0794
3	7.7493	478.91	49.82	481.49	549.525	530.535	17.874	15.795	.4243	5.94	-3.81	18.606	.0794
4	7.7890	477.85	48.91	480.35	549.603	530.704	17.866	15.798	.4232	5.84	-3.56	20.075	.0794
5	7.8235	476.65	48.13	479.03	549.673	530.873	17.857	15.801	.4220	5.77	-3.31	21.798	.0794
6	7.8711	474.55	47.37	476.91	549.742	531.112	17.840	15.804	.4200	5.70	-3.05	23.846	.0794
7	7.9134	472.47	46.58	474.77	549.859	531.395	17.822	15.806	.4181	5.64	-2.77	26.330	.0794
8	7.9567	470.35	46.06	472.61	549.969	531.574	17.804	15.807	.4160	5.59	-2.48	29.409	.0793
9	8.0009	469.52	45.65	471.73	550.105	531.878	17.796	15.808	.4152	5.55	-2.18	33.265	.0793
10	8.0458	470.15	45.47	472.35	550.423	532.149	17.800	15.808	.4156	5.52	-1.89	38.153	.0793
11	8.0914	470.92	45.39	473.10	550.740	532.407	17.805	15.807	.4162	5.51	-1.60	44.369	.0792
12	8.1376	471.55	45.37	473.74	550.858	532.475	17.808	15.805	.4167	5.50	-1.31	52.448	.0792
13	8.1845	472.61	45.46	474.79	550.678	532.214	17.813	15.801	.4177	5.49	-1.05	63.937	.0792
14	8.2319	473.85	45.62	476.05	550.492	531.930	17.820	15.796	.4190	5.50	-.81	81.857	.0792
15	8.2739	475.15	45.56	477.37	550.700	532.035	17.823	15.789	.4201	5.51	-.59	113.153	.0792
16	8.3235	470.79	45.67	473.00	551.294	532.970	17.772	15.781	.4159	5.54	-.37	176.645	.0790
17	8.3735	465.47	45.59	467.70	551.893	533.978	17.712	15.772	.4108	5.59	-.13	340.518	.0788
18	8.4238	460.45	45.82	462.73	552.221	534.585	17.656	15.763	.4062	5.68	.15	1260.722	.0787
19	8.4822	457.50	45.71	459.88	552.568	535.247	17.619	15.753	.4035	5.83	.45	-1393.453	.0785
20	8.5355	454.84	48.18	457.38	552.945	535.812	17.584	15.742	.4011	6.05	.76	-553.126	.0784
21	8.5930	451.91	50.10	454.68	553.366	536.435	17.548	15.732	.3985	6.33	1.06	-610.607	.0782

BLADE DATA

LOCAT -ION	BLADE-ANGLES SECTION	BLADE-ANGLES LEAN	REL FLOW ANGLE	DEVIATION INCIDENCE	LOSS COEFF	BLADE SPEED	RELATIVE MACH NO	RELATIVE VELOCITY	RELATIVE PRESSURE	RELATIVE TEMPERATURE	PRESSURE RATIO	DELTA T ON T	ISENTROPIC EFFICIENCY	POLYTROPIC EFFICIENCY
1	3.965	-1.054	6.183	2.218	.0649	0.0	.4263	483.58	17.887	549.342	1.217	.059	.9738	.9738
2	3.832	-.994	6.054	2.222	.0649	0.0	.4253	482.56	17.881	549.437	1.217	.059	.9682	.9698
3	3.699	-.920	5.939	2.240	.0653	0.0	.4243	481.49	17.874	549.525	1.216	.059	.9634	.9644
4	3.571	-.835	5.844	2.273	.0663	0.0	.4232	480.35	17.866	549.603	1.216	.060	.9589	.9608
5	3.448	-.747	5.756	2.313	.0682	0.0	.4220	479.08	17.857	549.673	1.215	.060	.9542	.9595
6	3.328	-.660	5.700	2.372	.0732	0.0	.4200	476.91	17.840	549.742	1.214	.060	.9472	.9486
7	3.211	-.593	5.642	2.431	.0791	0.0	.4181	474.77	17.822	549.859	1.213	.060	.9386	.9403
8	3.055	-.515	5.593	2.494	.0853	0.0	.4160	472.61	17.804	549.969	1.211	.060	.9302	.9328
9	2.996	-.458	5.553	2.557	.0884	0.0	.4152	471.73	17.796	550.105	1.211	.061	.9240	.9261
10	2.907	-.407	5.524	2.617	.0865	0.0	.4156	472.35	17.800	550.423	1.211	.061	.9159	.9182
11	2.835	-.353	5.505	2.670	.0891	0.0	.4162	473.10	17.805	550.740	1.212	.062	.9081	.9106
12	2.783	-.282	5.496	2.713	.0868	0.0	.4167	473.74	17.808	550.858	1.212	.062	.9055	.9080
13	2.752	-.139	5.494	2.742	.0780	0.0	.4177	474.79	17.813	550.678	1.212	.062	.9122	.9146
14	2.745	-.142	5.499	2.753	.0689	0.0	.4190	476.05	17.820	550.492	1.213	.061	.9193	.9215
15	2.765	-.155	5.512	2.747	.0570	0.0	.4201	477.37	17.823	550.700	.213	.062	.9143	.9166
16	2.811	-.249	5.541	2.730	.0600	0.0	.4159	473.00	17.772	551.294	1.209	.063	.8839	.8878
17	2.879	-.411	5.594	2.714	.0663	0.0	.4108	467.70	17.712	551.893	1.205	.064	.8521	.8560
18	2.972	-.620	5.683	2.712	.0801	0.0	.4062	462.73	17.656	552.221	1.201	.065	.8291	.8335
19	3.101	-.825	5.829	2.728	.0877	0.0	.4035	459.88	17.619	552.568	1.199	.065	.8109	.8157
20	3.282	-.972	6.045	2.764	.0951	0.0	.4011	457.38	17.584	552.945	1.197	.066	.7931	.7982
21	3.508	-1.055	6.326	2.818	.1038	0.0	.3985	454.68	17.548	553.366	1.194	.067	.7741	.7796

STATION 14 INTEGRATED PERFORMANCE PRESSURE RATIO = 1.209 ISEN. EFF.= .897 POLY. EFF.= .900 DELTA T ON T = .062

STATION 15 FLOW FIELD DESCRIPTION

STREAM -LINE	RADIUS	VELOCITIES MERID	VELOCITIES TANGEN	VELOCITIES TOTAL	TEMPERATURES TOTAL	TEMPERATURES STATIC	PRESSURES TOTAL	PRESSURES STATIC	MACH NO	ANGLES WHIRL	ANGLES SLOPE	RADIUS OF CURVATURE	SPECIFIC WEIGHT
1	7.6400	427.54	0.00	427.54	549.342	534.371	17.832	16.182	.3754	0.00	-1.66	10.624	.0808
2	7.6804	427.86	0.00	427.86	549.437	534.443	17.821	16.170	.3757	0.00	-1.61	11.252	.0807
3	7.7217	428.09	0.00	428.09	549.525	534.515	17.810	16.158	.3759	0.00	-1.56	11.970	.0807
4	7.7637	428.22	0.00	428.22	549.503	534.584	17.799	16.147	.3759	0.00	-1.50	12.803	.0806
5	7.8065	428.11	0.00	428.11	549.673	534.661	17.786	16.136	.3758	0.00	-1.43	13.783	.0805
6	7.8501	426.55	0.00	426.55	549.742	534.840	17.762	16.126	.3744	0.00	-1.35	14.981	.0804
7	7.8947	424.82	0.00	424.82	549.859	535.077	17.737	16.117	.3728	0.00	-1.26	16.520	.0804
8	7.9402	422.89	0.00	422.89	549.969	535.321	17.712	16.108	.3710	0.00	-1.15	18.573	.0803
9	7.9866	422.68	0.00	422.68	550.105	535.472	17.702	16.101	.3708	0.00	-1.03	21.374	.0802
10	8.0336	424.28	0.00	424.28	550.423	535.680	17.706	16.094	.3721	0.00	-.91	25.198	.0802
11	8.0812	425.75	0.00	425.75	550.740	535.893	17.711	16.089	.3733	0.00	-.78	30.579	.0801
12	8.1293	427.21	0.00	427.21	550.858	535.910	17.717	16.084	.3746	0.00	-.66	38.578	.0801
13	8.1779	429.66	0.00	429.66	550.678	535.558	17.734	16.080	.3769	0.00	-.54	50.863	.0801
14	8.2268	431.99	0.00	431.99	550.492	535.209	17.750	16.078	.3790	0.00	-.43	70.831	.0801
15	8.2760	434.36	0.00	434.36	550.700	535.248	17.757	16.076	.3811	0.00	-.32	107.304	.0801
16	8.3261	428.34	0.00	428.34	551.294	536.267	17.714	16.074	.3755	0.00	-.22	216.335	.0800
17	8.3775	420.66	0.00	420.66	551.893	537.401	17.650	16.074	.3683	0.00	-.10	-1265.921	.0798
18	8.4312	412.28	0.00	412.28	552.221	538.301	17.584	16.075	.3607	0.00	.04	-138.838	.0797
19	8.4861	406.94	0.00	406.94	552.568	539.006	17.544	16.076	.3558	0.00	.19	-69.433	.0796
20	8.5424	402.05	0.00	402.05	552.945	539.708	17.509	16.079	.3513	0.00	.35	-45.697	.0795
21	8.6000	396.80	0.00	396.80	553.366	540.473	17.474	16.084	.3465	0.00	.52	-37.905	.0794

BLADE DATA

LOCAT -ION	BLADE-ANGLES SECTION	BLADE-ANGLES LEAN	REL FLOW ANGLE	DEVIATION INCIDENCE	LOSS COEFF	BLADE SPEED	RELATIVE MACH NO	RELATIVE VELOCITY	RELATIVE PRESSURE	RELATIVE TEMPERATURE	PRESSURE RATIO	DELTA T ON T	ISENTROPIC EFFICIENCY	POLYTROPIC EFFICIENCY
1	-7.239	.020	0.000	7.239	.0862	0.0	.3754	427.54	17.832	549.342	1.213	.059	.9574	.9586
2	-7.399	.020	0.000	7.399	.0869	0.0	.3757	427.86	17.821	549.437	1.213	.059	.9513	.9527
3	-7.567	.019	0.000	7.567	.0878	0.0	.3759	428.09	17.810	549.525	1.212	.059	.9454	.9469
4	-7.739	.017	0.000	7.739	.0894	0.0	.3759	428.22	17.799	549.503	1.211	.060	.9398	.9414
5	-7.910	.015	0.000	7.910	.0920	0.0	.3758	428.11	17.786	549.673	1.210	.060	.9340	.9358
6	-8.079	.013	0.000	8.079	.0988	0.0	.3744	426.55	17.762	549.742	1.209	.060	.9252	.9272
7	-8.246	.011	0.000	8.246	.1065	0.0	.3728	424.82	17.737	549.359	1.207	.060	.9148	.9170
8	-8.407	.010	0.000	8.407	.1147	0.0	.3710	422.89	17.712	549.969	1.205	.060	.9045	.9078
9	-8.558	.008	0.000	8.558	.1185	0.0	.3708	422.68	17.702	550.105	1.205	.061	.8977	.9003
10	-8.695	.006	0.000	8.695	.1185	0.0	.3721	424.28	17.706	550.423	1.205	.061	.8899	.8928
11	-8.814	.005	0.000	8.814	.1189	0.0	.3733	425.75	17.711	550.740	1.205	.062	.8824	.8855
12	-8.914	.003	0.000	8.914	.1155	0.0	.3746	427.21	17.717	550.858	1.206	.062	.8809	.8840
13	-8.992	.001	0.000	8.992	.1035	0.0	.3769	429.66	17.734	550.578	1.207	.062	.8904	.8933
14	-9.043	-.001	0.000	9.043	.0918	0.0	.3790	431.99	17.750	550.492	1.208	.061	.9002	.9028
15	-9.062	-.004	0.000	9.062	.0760	0.0	.3811	434.36	17.767	550.700	1.209	.062	.8989	.9016
16	-9.059	-.007	0.000	9.059	.0502	0.0	.3755	428.34	17.714	551.294	1.205	.063	.8684	.8718
17	-9.059	-.012	0.000	9.059	.0883	0.0	.3683	420.66	17.650	551.893	1.201	.064	.8357	.8399
18	-9.082	-.017	0.000	9.082	.1074	0.0	.3507	412.28	17.584	552.221	1.197	.065	.8181	.8149
19	-9.122	-.024	0.000	9.122	.1175	0.0	.3558	406.94	17.544	552.568	1.194	.065	.7914	.7965
20	-9.167	-.031	0.000	9.167	.1271	0.0	.3513	402.05	17.509	552.345	1.191	.066	.7736	.7792
21	-9.213	-.038	0.000	9.213	.1380	0.0	.3465	396.80	17.474	553.366	1.189	.067	.7551	.7610

STATION 15 INTEGRATED PERFORMANCE PRESSURE RATIO = 1.204 ISEN. EFF.= .877 POLY. EFF.= .880 DELTA T ON T = .062

STATION 16 FLOW FIELD DESCRIPTION

STREAM -LINE	RADIUS	VELOCITIES MERID	VELOCITIES TANGEN	VELOCITIES TOTAL	TEMPERATURES TOTAL	TEMPERATURES STATIC	PRESSURES TOTAL	PRESSURES STATIC	MACH NO	ANGLES WHIRL	ANGLES SLOPE	RADIUS OF CURVATURE	SPECIFIC WEIGHT
1	7.6400	439.53	0.00	439.53	549.342	533.515	17.832	16.091	.3863	0.00	0.00	0.000	.0803
2	7.6797	438.33	0.00	438.33	549.437	533.701	17.821	16.091	.3851	0.00	-.03	1004.014	.0804
3	7.7202	437.05	0.00	437.05	549.525	533.880	17.810	16.091	.3839	0.00	-.06	542.486	.0804
4	7.7617	435.75	0.00	435.75	549.603	534.051	17.799	16.090	.3827	0.00	-.09	393.871	.0804
5	7.8040	434.23	0.00	434.23	549.673	534.225	17.786	16.090	.3814	0.00	-.11	322.434	.0804
6	7.8473	431.47	0.00	431.47	549.742	534.494	17.762	16.089	.3788	0.00	-.12	283.896	.0803
7	7.8916	428.60	0.00	428.60	549.859	534.814	17.737	16.089	.3762	0.00	-.13	262.224	.0803
8	7.9370	425.62	0.00	425.62	549.969	535.132	17.712	16.088	.3735	0.00	-.14	251.288	.0802
9	7.9834	424.45	0.00	424.45	550.105	535.345	17.702	16.088	.3724	0.00	-.14	248.403	.0802
10	8.0305	425.24	0.00	425.24	550.423	535.613	17.706	16.087	.3730	0.00	-.14	252.468	.0801
11	8.0782	426.02	0.00	426.02	550.740	535.874	17.711	16.087	.3736	0.00	-.13	263.222	.0801
12	8.1265	426.93	0.00	426.93	550.858	535.930	17.717	16.086	.3743	0.00	-.13	281.191	.0801
13	8.1753	428.95	0.00	428.95	550.678	535.608	17.734	16.086	.3762	0.00	-.12	307.731	.0801
14	8.2244	430.97	0.00	430.97	550.492	535.280	17.750	16.085	.3781	0.00	-.10	345.342	.0802
15	8.2740	433.14	0.00	433.14	550.700	535.334	17.767	16.085	.3800	0.00	-.09	398.596	.0802
16	8.3245	426.93	0.00	426.93	551.294	536.362	17.714	16.084	.3742	0.00	-.08	477.751	.0800
17	8.3755	419.28	0.00	419.28	551.893	537.495	17.650	16.084	.3671	0.00	-.06	606.083	.0798
18	8.4302	410.98	0.00	410.98	552.221	538.388	17.584	16.084	.3595	0.00	-.04	839.245	.0797
19	8.4855	405.90	0.00	405.90	552.568	539.075	17.544	16.084	.3549	0.00	-.03	1347.372	.0796
20	8.5421	401.43	0.00	401.43	552.945	539.748	17.509	16.084	.3507	0.00	-.01	2995.874	.0795
21	8.6000	396.80	0.00	396.80	553.366	540.473	17.474	16.084	.3465	0.00	0.00	0.000	.0794

STATION 17 FLOW FIELD DESCRIPTION

STREAM -LINE	RADIUS	VELOCITIES MERID	VELOCITIES TANGEN	VELOCITIES TOTAL	TEMPERATURES TOTAL	TEMPERATURES STATIC	PRESSURES TOTAL	PRESSURES STATIC	MACH NO	ANGLES WHIRL	ANGLES SLOPE	RADIUS OF CURVATURE	SPECIFIC WEIGHT
1	7.6400	440.55	0.00	440.55	549.342	533.445	17.832	16.083	.3872	0.00	0.00	0.000	.0804
2	7.6796	439.29	0.00	439.29	549.437	533.631	17.821	16.083	.3860	0.00	-.00	0.000	.0804
3	7.7201	437.93	0.00	437.93	549.525	533.813	17.810	16.084	.3848	0.00	-.00	0.000	.0804
4	7.7615	436.05	0.00	436.05	549.603	533.987	17.799	16.084	.3836	0.00	-.00	0.000	.0804
5	7.8038	435.14	0.00	435.14	549.673	534.164	17.786	16.084	.3822	0.00	-.01	0.000	.0803
6	7.8471	432.27	0.00	432.27	549.742	534.437	17.762	16.084	.3796	0.00	-.01	0.000	.0803
7	7.8914	429.33	0.00	429.33	549.859	534.762	17.737	16.084	.3769	0.00	-.01	0.000	.0802
8	7.9368	426.29	0.00	426.29	549.969	535.085	17.712	16.084	.3741	0.00	-.01	0.000	.0802
9	7.9831	425.05	0.00	425.05	550.105	535.307	17.702	16.084	.3729	0.00	-.01	0.000	.0802
10	8.0302	425.75	0.00	425.75	550.423	535.577	17.706	16.084	.3734	0.00	-.01	0.000	.0801
11	8.0779	426.45	0.00	426.45	550.740	535.844	17.711	16.084	.3740	0.00	-.01	0.000	.0801
12	8.1262	427.28	0.00	427.28	550.858	535.905	17.717	16.084	.3747	0.00	-.01	0.000	.0801
13	8.1750	429.23	0.00	429.23	550.678	535.588	17.734	16.084	.3765	0.00	-.01	0.000	.0801
14	8.2242	431.18	0.00	431.18	550.492	535.265	17.750	16.084	.3783	0.00	-.01	0.000	.0802
15	8.2738	433.29	0.00	433.29	550.700	535.323	17.767	16.083	.3801	0.00	-.01	0.000	.0802
16	8.3242	427.10	0.00	427.10	551.294	536.354	17.714	16.083	.3743	0.00	-.01	0.000	.0800
17	8.3763	419.35	0.00	419.35	551.893	537.491	17.650	16.083	.3672	0.00	-.01	0.000	.0798
18	8.4300	411.02	0.00	411.02	552.221	538.386	17.584	16.083	.3596	0.00	-.00	0.000	.0797
19	8.4854	405.92	0.00	405.92	552.568	539.074	17.544	16.083	.3549	0.00	-.00	0.000	.0796
20	8.5420	401.44	0.00	401.44	552.945	539.748	17.509	16.083	.3507	0.00	-.00	0.000	.0795
21	8.6000	396.80	0.00	396.80	553.366	540.473	17.474	16.084	.3465	0.00	0.00	0.000	.0794

ROTOR PERFORMANCE

LOCAT -ION	INLET RADIUS	OUTLET RADIUS	INLET M. NO	INCID -ENCE	DEVIA -TION	LOSS COEFF	2-D D FACTOR	3-D D FACTOR	DELTA P ON Q	REL V RATIO	DELTA H/U**2	SECTION-ANGLES INLET	SECTION-ANGLES OUTLET	LEAN-ANGLES INLET	LEAN-ANGLES OUTLET
1	6.7500	7.5499	.4553	7.602	13.230	-.0309	.2553	.2639	.4726	.8745	.6483	-62.567	-11.816	17.285	2.399
2	6.8607	7.5954	.4635	7.747	12.704	-.0261	.2742	.2820	.4731	.8577	.6426	-62.593	-12.965	16.450	2.648
3	6.9822	7.6420	.4711	7.820	12.230	-.0220	.2910	.2980	.4719	.8425	.6366	-62.593	-14.127	15.434	2.944
4	7.0965	7.6895	.4786	7.833	11.807	-.0165	.3058	.3120	.4697	.8293	.6303	-62.659	-15.278	14.148	3.268
5	7.2097	7.7380	.4860	7.855	11.370	-.0155	.3190	.3244	.4666	.8174	.6238	-62.723	-16.392	12.766	3.599
6	7.3219	7.7874	.4933	7.913	10.933	-.0129	.3307	.3354	.4629	.8067	.6173	-62.759	-17.440	11.443	3.913
7	7.4332	7.8377	.5005	7.962	10.557	-.0085	.3424	.3465	.4587	.7963	.6117	-62.816	-18.398	10.299	4.185
8	7.5437	7.8889	.5076	7.975	10.417	-.0053	.3529	.3563	.4542	.7865	.6059	-62.921	-19.252	9.381	4.489
9	7.6537	7.9409	.5145	7.983	10.237	-.0010	.3631	.3658	.4492	.7772	.6006	-63.049	-20.041	8.554	4.589
10	7.7632	7.9939	.5215	8.011	9.935	.0092	.3767	.3789	.4439	.7651	.5987	-63.172	-20.750	7.696	4.730
11	7.8725	8.0479	.5283	8.061	9.816	.0137	.3893	.3909	.4383	.7540	.5966	-63.292	-21.401	6.864	4.836
12	7.9818	8.1029	.5351	8.123	9.935	.0245	.3979	.3990	.4322	.7455	.5907	-63.418	-22.006	6.170	4.913
13	8.0912	8.1588	.5419	8.203	10.360	.0252	.4014	.4020	.4256	.7411	.5794	-63.546	-22.567	5.640	4.955
14	8.2009	8.2156	.5484	8.317	10.849	.0258	.4040	.4041	.4135	.7373	.5681	-63.662	-23.078	5.243	4.955
15	8.3111	8.2736	.5550	8.472	11.302	.0429	.4179	.4176	.4108	.7233	.5638	-63.763	-23.539	4.923	4.985
16	8.4222	8.3337	.5615	8.667	11.799	.0750	.4427	.4420	.4027	.7011	.5660	-63.852	-23.949	4.581	4.794
17	8.5343	8.3965	.5680	8.892	12.451	.1060	.4669	.4657	.3944	.6789	.5678	-63.939	-24.306	4.142	4.616
18	8.6477	8.4616	.5744	9.137	13.063	.1210	.4790	.4774	.3859	.6674	.5646	-64.043	-24.599	3.610	4.388
19	8.7628	8.5297	.5809	9.386	13.906	.1365	.4912	.4893	.3771	.6559	.5615	-64.181	-24.815	3.010	4.130
20	8.8801	8.5980	.5873	9.608	14.722	.1528	.5040	.5017	.3683	.6435	.5587	-64.336	-24.941	2.397	3.865
21	9.0000	8.6699	.5937	10.024	15.901	.1705	.5186	.5160	.3600	.6297	.5562	-64.476	-24.964	1.836	3.617

STATOR PERFORMANCE

LOCAT -ION	INLET RADIUS	OUTLET RADIUS	INLET M. NO	INCID -ENCE	DEVIA -TION	LOSS COEFF	2-D D FACTOR	3-D D FACTOR	DELTA P ON Q	REL V RATIO	DELTA H/U**2	SECTION-ANGLES INLET	SECTION-ANGLES OUTLET	LEAN-ANGLES INLET	LEAN-ANGLES OUTLET
1	7.6199	7.6400	.4732	-8.619	7.239	.0862	.3346	.3344	.2696	.7997	0.0000	48.917	-7.239	-39.941	.028
2	7.6779	7.6804	.4865	-9.315	7.399	.0869	.3579	.3578	.3003	.7792	0.0000	48.042	-7.399	-36.697	.020
3	7.7319	7.7217	.4986	-9.654	7.557	.0878	.3762	.3783	.3257	.7615	0.0000	47.337	-7.557	-33.289	.019
4	7.7821	7.7637	.5093	-10.308	7.739	.0894	.3943	.3945	.3441	.7473	0.0000	46.827	-7.739	-29.837	.017
5	7.8296	7.8065	.5155	-10.630	7.910	.0920	.4069	.4071	.3564	.7375	0.0000	46.421	-7.910	-26.387	.015
6	7.8753	7.8501	.5210	-10.834	8.079	.0988	.4191	.4193	.3643	.7277	0.0000	46.074	-8.079	-22.991	.013
7	7.9199	7.8947	.5249	-10.876	8.246	.1065	.4297	.4299	.3688	.7195	0.0000	45.749	-8.246	-19.697	.011
8	7.9636	7.9402	.5276	-10.837	8.407	.1147	.4386	.4388	.3709	.7127	0.0000	45.433	-8.407	-16.429	.010
9	8.0073	7.9866	.5292	-10.710	8.558	.1185	.4432	.4434	.3709	.7101	0.0000	45.141	-8.558	-12.986	.008
10	8.0509	8.0336	.5302	-10.350	8.695	.1185	.4445	.4446	.3691	.7114	0.0000	44.887	-8.695	-9.196	.006
11	8.0947	8.0812	.5303	-10.002	8.814	.1189	.4445	.4446	.3657	.7135	0.0000	44.698	-8.814	-5.202	.005
12	8.1388	8.1293	.5286	-9.860	8.914	.1155	.4411	.4412	.3625	.7181	0.0000	44.602	-8.914	-1.356	.003
13	8.1835	8.1779	.5247	-10.020	8.992	.1038	.4314	.4314	.3600	.7274	0.0000	44.610	-8.992	2.081	.001
14	8.2288	8.2268	.5200	-10.203	9.043	.0918	.4202	.4202	.3563	.7379	0.0000	44.690	-9.043	5.589	-.001
15	8.2752	8.2765	.5135	-9.613	9.062	.0760	.4084	.4084	.3521	.7505	0.0000	44.800	-9.062	10.024	-.004
16	8.3234	8.3261	.5049	-8.812	9.059	.0802	.4099	.4099	.3470	.7517	0.0000	44.946	-9.059	16.049	-.007
17	8.3741	8.3778	.4947	-7.621	9.059	.0889	.4115	.4115	.3384	.7523	0.0000	45.289	-9.059	23.193	-.012
18	8.4278	8.4312	.4842	-7.512	9.082	.1074	.4114	.4114	.3218	.7523	0.0000	46.034	-9.082	30.509	-.017
19	8.4855	8.4861	.4710	-7.314	9.122	.1176	.4008	.4008	.2978	.7624	0.0000	47.229	-9.122	37.214	-.024
20	8.5489	8.5424	.4544	-7.043	9.157	.1271	.3832	.3832	.2640	.7792	0.0000	48.817	-9.157	42.734	-.031
21	8.6199	8.6000	.4353	-6.636	9.213	.1380	.3503	.3605	.2203	.8013	0.0000	50.914	-9.213	46.652	-.038

WAKE AND BOUNDARY LAYER BLOCKAGES (PERCENT)

STATION	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17
MID BLOCKAGE	0.0	0.0	0.3	0.0	9.5	4.1	5.9	8.3	7.8	8.7	9.0	9.1	9.2	9.3	9.3	10.5	10.6
DIST FACTOR	1.0	1.0	1.0	1.0	.5	.5	.3	0.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
INT BLOCKAGE	0.0	0.0	0.0	0.0	9.7	4.1	6.1	8.6	7.8	8.7	9.0	9.1	9.2	9.3	9.3	10.5	10.6

SUMMARY POINT NO. 1 THE CALCULATION IS CONVERGED PASS 18

TEST POINT TITLE = 720818104505

FLOW = 10.34 SPEED = 8153.5 PRESSURE RATIO = 1.204 ISENTROPIC EFFY = .8770 POLYTROPIC EFFY = .8802 DEL T/T = .0620

2. PHASE II WITHIN-BLADE ANALYSIS
(50% SPEED)
TEST POINT 208220415050

STATION 1 FLOW FIELD DESCRIPTION

STREAM -LINE	RADIUS	VELOCITIES MERID	VELOCITIES TANGEN	VELOCITIES TOTAL	TEMPERATURES TOTAL	TEMPERATURES STATIC	PRESSURES TOTAL	PRESSURES STATIC	MACH NO	ANGLES WHIRL	ANGLES SLOPE	RADIUS OF CURVATURE	SPECIFIC WEIGHT
1	6.0686	170.12	0.00	170.12	518.688	516.315	14.696	14.461	.1520	0.00	20.93	0.000	.0747
2	6.2268	170.12	0.00	170.12	518.688	516.315	14.696	14.461	.1520	0.00	19.76	0.000	.0747
3	6.3836	170.12	0.00	170.12	518.688	516.315	14.696	14.461	.1520	0.00	18.57	0.000	.0747
4	6.5392	170.12	0.00	170.12	518.688	516.315	14.696	14.461	.1520	0.00	17.38	0.000	.0747
5	6.6937	170.12	0.00	170.12	518.688	516.315	14.696	14.461	.1520	0.00	16.18	0.000	.0747
6	6.8472	170.12	0.00	170.12	518.688	516.315	14.696	14.461	.1520	0.00	14.98	0.000	.0747
7	6.9998	170.12	0.00	170.12	518.688	516.315	14.696	14.461	.1520	0.00	13.78	0.000	.0747
8	7.1517	170.12	0.00	170.12	518.688	516.315	14.696	14.461	.1520	0.00	12.58	0.000	.0747
9	7.3023	170.12	0.00	170.12	518.688	516.315	14.696	14.461	.1520	0.00	11.39	0.000	.0747
10	7.4534	170.12	0.00	170.12	518.688	516.316	14.696	14.461	.1520	0.00	10.20	0.000	.0747
11	7.6034	170.12	0.00	170.12	518.688	516.315	14.696	14.461	.1520	0.00	9.03	0.000	.0747
12	7.7529	170.12	0.00	170.12	518.688	516.316	14.696	14.461	.1520	0.00	7.89	0.000	.0747
13	7.9021	170.12	0.00	170.12	518.688	516.315	14.696	14.461	.1520	0.00	6.76	0.000	.0747
14	8.0510	170.12	0.00	170.12	518.688	516.315	14.696	14.461	.1520	0.00	5.68	0.000	.0747
15	8.1997	170.12	0.00	170.12	518.688	516.316	14.696	14.461	.1520	0.00	4.64	0.000	.0747
16	8.3482	170.12	0.00	170.12	518.688	516.315	14.696	14.461	.1520	0.00	3.65	0.000	.0747
17	8.4966	170.12	0.00	170.12	518.688	516.315	14.696	14.461	.1520	0.00	2.74	0.000	.0747
18	8.6450	170.12	0.00	170.12	518.688	516.315	14.696	14.461	.1520	0.00	1.90	0.000	.0747
19	8.7933	170.12	0.00	170.12	518.688	516.315	14.696	14.461	.1520	0.00	1.15	0.000	.0747
20	8.9416	170.12	0.00	170.12	518.688	516.316	14.696	14.461	.1520	0.00	.51	0.000	.0747
21	9.0900	170.12	0.00	170.12	518.688	516.315	14.696	14.461	.1520	0.00	0.00	0.000	.0747

STATION 2 FLOW FIELD DESCRIPTION

STREAM -LINE	RADIUS	VELOCITIES MERID	VELOCITIES TANGEN	VELOCITIES TOTAL	TEMPERATURES TOTAL	TEMPERATURES STATIC	PRESSURES TOTAL	PRESSURES STATIC	MACH NO	ANGLES WHIRL	ANGLES SLOPE	RADIUS OF CURVATURE	SPECIFIC WEIGHT
1	6.3746	183.68	0.00	183.68	518.688	515.922	14.696	14.423	.1641	0.00	20.83	-205.758	.0746
2	6.5[illegible]	184.50	0.00	184.50	518.688	515.897	14.696	14.420	.1649	0.00	19.60	-139.003	.0746
3	6.6[illegible]23	185.25	0.00	185.25	518.688	515.875	14.696	14.418	.1655	0.00	18.39	-113.682	.0746
4	6.7896	185.93	0.00	185.93	518.688	515.854	14.695	14.416	.1662	0.00	17.17	-99.393	.0746
5	6.9258	186.55	0.00	186.55	518.688	515.835	14.696	14.414	.1667	0.00	15.95	-88.888	.0746
6	7.0513	187.12	0.00	187.12	518.688	515.818	14.696	14.412	.1672	0.00	14.72	-79.778	.0746
7	7.1961	187.61	0.00	187.61	518.688	515.803	14.696	14.411	.1677	0.00	13.49	-71.294	.0746
8	7.3303	188.01	0.00	188.01	518.688	515.790	14.696	14.410	.1680	0.00	12.26	-63.293	.0745
9	7.4640	188.31	0.00	188.31	518.688	515.781	14.696	14.409	.1683	0.00	11.02	-55.842	.0745
10	7.5974	188.49	0.00	188.49	518.688	515.775	14.696	14.408	.1685	0.00	9.79	-49.024	.0745
11	7.7306	188.54	0.00	188.54	518.688	515.774	14.696	14.408	.1685	0.00	8.56	-42.884	.0745
12	7.8637	188.43	0.00	188.43	518.688	515.777	14.696	14.408	.1684	0.00	7.35	-37.422	.0745
13	7.9970	188.15	0.00	188.15	518.688	515.785	14.696	14.409	.1682	0.00	6.15	-32.608	.0745
14	8.1306	187.69	0.00	187.69	518.688	515.800	14.696	14.411	.1677	0.00	4.97	-28.366	.0746
15	8.2646	187.02	0.00	187.02	518.688	515.821	14.696	14.413	.1671	0.00	3.83	-24.662	.0746
16	8.3993	186.13	0.00	186.13	518.688	515.848	14.696	14.415	.1663	0.00	2.72	-21.432	.0746
17	8.5348	185.01	0.00	185.01	518.688	515.882	14.696	14.419	.1653	0.00	1.66	-18.619	.0746
18	8.6714	183.63	0.00	183.63	518.688	515.924	14.696	14.423	.1641	0.00	.66	-16.170	.0746
19	8.8093	181.95	0.00	181.95	518.688	515.974	14.696	14.428	.1626	0.00	-.28	-14.034	.0746
20	8.9488	179.99	0.00	179.99	518.688	516.032	14.696	14.433	.1608	0.00	-1.14	-12.165	.0746
21	9.0900	177.69	0.00	177.69	518.688	516.100	14.696	14.440	.1558	0.00	-1.91	-10.518	.0747

STATION 3 FLOW FIELD DESCRIPTION

STREAM LINE	RADIUS	VELOCITIES MERID	VELOCITIES TANGEN	VELOCITIES TOTAL	TEMPERATURES TOTAL	TEMPERATURES STATIC	PRESSURES TOTAL	PRESSURES STATIC	MACH NO	ANGLES WHIRL	ANGLES SLOPE	RADIUS OF CURVATURE	SPECIFIC WEIGHT
1	6.6016	198.92	0.00	198.92	518.688	515.444	14.696	14.376	.1778	0.00	20.54	-83.831	.0744
2	6.7260	199.87	0.00	199.87	518.688	515.413	14.696	14.373	.1787	0.00	19.39	-262.785	.0744
3	6.8496	200.93	0.00	200.93	518.688	515.376	14.696	14.369	. 797	0.00	18.21	1152.407	.0744
4	6.9725	202.21	0.00	202.21	518.688	515.335	14.696	14.365	.1808	0.00	17.00	343.601	.0744
5	7.0946	203.44	0.00	203.44	518.688	515.295	14.696	14.361	.1819	0.00	15.76	333.477	.0744
6	7.2161	204.63	0.00	204.63	518.688	515.255	14.696	14.357	.1830	0.00	14.49	634.577	.0744
7	7.3368	205.72	0.00	205.72	518.688	515.219	14.696	14.354	.1840	0.00	13.19	-945.614	.0743
8	7.4571	206.68	0.00	206.68	518.688	515.185	14.696	14.350	.1848	0.00	11.87	-214.030	.0743
9	7.5769	207.45	0.00	207.46	518.688	515.160	14.696	14.348	.1855	0.00	10.52	-109.951	.0743
10	7.6964	208.04	0.00	208.04	518.688	515.140	14.696	14.346	.1860	0.00	9.17	-70.393	.0743
11	7.8158	208.38	0.00	208.38	518.688	515.125	14.696	14.345	.1863	0.00	7.80	-50.154	.0743
12	7.9353	208.45	0.00	208.45	518.688	515.125	14.696	14.345	.1864	0.00	6.43	-38.026	.0743
13	8.0551	208.24	0.00	208.24	518.688	515.133	14.696	14.345	.1862	0.00	5.05	-29.997	.0743
14	8.1753	207.72	0.00	207.72	518.688	515.151	14.696	14.347	.1858	0.00	3.67	-24.314	.0743
15	8.2962	206.85	0.00	206.85	518.688	515.180	14.696	14.350	.1850	0.00	2.30	-20.112	.0743
16	8.4180	205.64	0.00	205.64	518.688	515.221	14.696	14.354	.1839	0.00	.93	-16.907	.0743
17	8.5409	204.03	0.00	204.03	518.688	515.275	14.696	14.359	.1827	0.00	-.41	-14.407	.0744
18	8.6653	202.03	0.00	202.03	518.688	515.342	14.696	14.366	.1806	0.00	-1.74	-12.426	.0744
19	8.7914	199.61	0.00	199.61	518.688	515.422	14.696	14.373	.1785	0.00	-3.03	-10.848	.0744
20	8.9196	196.77	0.00	196.77	518.688	515.514	14.696	14.383	.1759	0.00	-4.28	-9.611	.0744
21	9.0500	193.55	0.00	193.55	518.688	515.617	14.696	14.393	.1730	0.00	-5.47	-8.690	.0745

STATION 4 FLOW FIELD DESCRIPTION

STREAM LINE	RADIUS	VELOCITIES MERID	VELOCITIES TANGEN	VELOCITIES TOTAL	TEMPERATURES TOTAL	TEMPERATURES STATIC	PRESSURES TOTAL	PRESSURES STATIC	MACH NO	ANGLES WHIRL	ANGLES SLOPE	RADIUS OF CURVATURE	SPECIFIC WEIGHT
1	6.7500	210.47	0.00	210.47	518.688	515.097	14.696	14.338	.1882	0.00	20.32	-388.054	.0743
2	6.8663	213.25	0.00	213.25	518.688	514.960	14.696	14.328	.1907	0.00	19.23	-117.333	.0742
3	6.9813	215.90	0.00	215.90	518.688	514.867	14.696	14.319	.1931	0.00	18.07	-75.671	.0742
4	7.0951	218.41	0.00	218.41	518.688	514.778	14.696	14.310	.1954	0.00	16.84	-59.238	.0742
5	7.2078	220.74	0.00	220.74	518.688	514.693	14.696	14.302	.1975	0.00	15.57	-50.415	.0741
6	7.3196	222.90	0.00	222.90	518.688	514.615	14.696	14.295	.1994	0.00	14.24	-44.375	.0741
7	7.4305	224.83	0.00	224.83	518.688	514.543	14.696	14.288	.2012	0.00	12.87	-39.481	.0741
8	7.5406	226.55	0.00	226.56	518.688	514.480	14.696	14.281	.2027	0.00	11.47	-35.376	.0741
9	7.6502	227.99	0.00	227.99	518.688	514.427	14.696	14.276	.2040	0.00	10.03	-31.986	.0741
10	7.7595	229.12	0.00	229.12	518.688	514.385	14.696	14.272	.2050	0.00	8.57	-29.473	.0740
11	7.8636	229.92	0.00	229.92	518.688	514.354	14.696	14.269	.2058	0.00	7.10	-27.737	.0740
12	7.9777	230.40	0.00	230.40	518.688	514.336	14.696	14.267	.2062	0.00	5.61	-26.381	.0740
13	8.0870	230.52	0.00	230.52	518.688	514.332	14.696	14.267	.2063	0.00	4.11	-25.098	.0740
14	8.1968	230.27	0.00	230.27	518.688	514.341	14.696	14.268	.2061	0.00	2.59	-23.594	.0740
15	8.3072	229.58	0.00	229.58	518.688	514.367	14.696	14.270	.2055	0.00	1.06	-21.877	.0740
16	8.4186	228.44	0.00	228.44	518.688	514.410	14.696	14.275	.2044	0.00	-.48	-20.314	.0740
17	8.5311	226.81	0.00	226.81	518.688	514.471	14.696	14.281	.2030	0.00	-2.01	-18.956	.0741
18	8.6451	224.65	0.00	224.65	518.688	514.551	14.696	14.288	.2010	0.00	-3.55	-17.341	.0741
19	8.7610	221.88	0.00	221.88	518.688	514.652	14.696	14.298	.1985	0.00	-5.11	-15.244	.0741
20	8.8731	218.37	0.00	218.37	518.688	514.779	14.696	14.311	.1953	0.00	-6.68	-12.833	.0742
21	9.0000	213.94	0.00	213.94	518.688	514.336	14.696	14.326	.1914	0.00	-8.25	-10.317	.0742

BLADE DATA

LOCAT -ION	BLADE-ANGLES SECTION	LEAN	REL FLOW ANGLE	DEVIATION INCIDENCE	LOSS COEFF	BLADE SPEED	RELATIVE MACH NO	RELATIVE VELOCITY	RELATIVE PRESSURE	RELATIVE TEMPERATURE	PRESSURE RATIO	DELTA T ON T	ISENTROPIC EFFICIENCY	POLYTROPIC EFFICIENCY
1	-62.667	17.205	-70.630	-8.014	0.0000	600.4	.5690	636.19	17.853	548.222	1.000	0.000	1.0000	1.0000
2	-62.597	16.454	-70.751	-8.154	0.0000	610.7	.5785	646.87	17.971	549.248	1.000	0.000	1.0000	1.0000
3	-62.601	15.443	-70.827	-8.226	0.0000	620.9	.5881	657.40	18.090	550.280	1.000	0.000	1.0000	1.0000
4	-62.669	14.165	-70.910	-8.240	0.0000	631.1	.5974	667.79	18.210	551.318	1.000	0.000	1.0000	1.0000
5	-62.736	12.739	-71.000	-8.264	0.0003	64[illegible]	.6065	678.03	18.332	552.362	1.000	0.000	1.0000	1.0000
6	-62.773	11.408	-71.099	-8.325	0.0000	651.0	.6157	688.12	18.455	553.414	1.000	0.000	1.0000	1.0000
7	-62.829	10.324	-71.210	-8.381	0.0000	660.9	.6245	698.09	18.580	554.473	1.000	0.000	1.0000	1.0000
8	-62.933	9.405	-71.335	-8.402	0.0000	670.7	.6335	707.92	18.706	555.541	1.000	0.000	1.0000	1.0000
9	-63.059	8.581	-71.476	-8.417	0.0000	680.4	.6422	717.61	18.834	556.520	1.000	0.000	1.0000	1.0000
10	-63.180	7.725	-71.635	-8.455	0.0003	690.2	.6508	727.19	18.964	557.711	1.000	0.000	1.0000	1.0000
11	-63.298	6.892	-71.813	-8.515	0.0000	659.9	.6593	736.65	19.056	558.815	1.000	0.000	1.0000	1.0000
12	-63.421	6.193	-72.011	-8.590	0.0003	709.5	.6677	746.03	19.231	559.935	1.000	0.000	1.0000	1.0000
13	-63.545	5.657	-72.230	-8.685	0.0000	719.3	.6760	755.32	19.369	561.072	1.000	0.000	1.0000	1.0000
14	-63.659	5.256	-72.472	-8.813	0.0000	729.0	.6842	764.55	19.510	562.230	1.000	0.000	1.0000	1.0000
15	-63.756	4.934	-72.739	-8.982	0.0000	738.9	.6924	773.71	19.654	563.410	1.000	0.000	1.0000	1.0000
16	-63.843	4.593	-73.034	-9.191	0.0000	748.8	.7006	782.84	19.803	564.516	1.000	0.000	1.0000	1.0000
17	-63.928	4.156	-73.358	-9.430	0.0000	758.3	.7087	791.95	19.956	565.351	1.000	0.000	1.0000	1.0000
18	-64.032	3.623	-73.713	-9.682	0.0003	768.9	.7168	801.07	20.113	567.119	1.000	0.000	1.0000	1.0000
19	-64.170	3.020	-74.106	-9.936	0.0000	779.2	.7249	810.20	20.277	568.425	1.000	0.000	1.0000	1.0000
20	-64.329	2.402	-74.543	-10.215	0.0000	789.7	.7330	819.37	20.447	569.774	1.000	0.000	1.0000	1.0000
21	-64.476	1.836	-75.036	-10.560	0.0003	800.5	.7411	828.58	20.624	571.173	1.000	0.000	1.0000	1.0000

STATION 5 FLOW FIELD DESCRIPTION

STREAM -LINE	RADIUS	VELOCITIES MERID	VELOCITIES TANGEN	VELOCITIES TOTAL	TEMPERATURES TOTAL	TEMPERATURES STATIC	PRESSURES TOTAL	PRESSURES STATIC	MACH NO	ANGLES WHIRL	ANGLES SLOPE	RADIUS OF CURVATURE	SPECIFIC WEIGHT
1	6.8979	259.64	130.94	290.79	531.857	524.927	16.051	15.328	.2576	26.76	22.32	6.199	.0779
2	7.0050	264.59	129.67	294.65	531.931	524.816	16.058	15.316	.2611	26.11	21.10	6.318	.0779
3	7.1106	269.32	128.22	298.28	531.980	524.689	16.062	15.302	.2643	25.46	19.75	6.688	.0778
4	7.2147	273.92	126.62	301.07	532.006	524.548	16.064	15.287	.2674	24.82	18.31	7.312	.0778
5	7.3175	278.25	125.04	305.06	532.027	524.400	16.066	15.271	.2704	24.20	16.79	8.274	.0777
6	7.4191	282.74	123.62	308.59	532.059	524.255	16.069	15.256	.2736	23.62	15.21	9.650	.0777
7	7.5197	287.05	122.35	312.04	532.101	524.122	16.073	15.242	.2767	23.08	13.68	11.683	.0776
8	7.6194	291.01	121.18	315.23	532.149	524.005	16.078	15.230	.2795	22.61	11.94	14.528	.0776
9	7.7184	294.57	120.20	318.15	532.214	523.919	16.084	15.220	.2821	22.20	10.27	19.377	.0775
10	7.8170	297.47	120.14	320.82	532.380	523.945	16.092	15.214	.2845	21.99	8.58	28.829	.0775
11	7.9154	[illegible]	120.28	323.34	532.568	524.000	16.102	15.210	.2867	21.84	6.89	54.362	.0775
12	8.0139	302.59	120.63	325.75	532.782	524.086	16.115	15.210	.2888	21.74	5.21	316.704	.0774
13	8.1126	304.84	121.23	328.06	533.026	524.206	16.131	15.213	.2908	21.69	3.53	-95.335	.0774
14	8.2115	306.91	122.04	330.28	533.298	524.358	16.150	15.219	.2928	21.68	1.86	-45.676	.0774
15	8.3110	306.33	123.92	332.30	533.703	524.654	16.171	15.228	.2945	21.90	.19	-32.874	.0775
16	8.4113	308.09	127.53	334.00	534.327	525.185	16.193	15.241	.2958	22.45	-1.45	-28.289	.0774
17	8.5128	308.60	131.24	335.34	534.976	525.761	16.217	15.256	.2969	23.04	-3.04	-27.489	.0774
18	8.6156	308.62	133.39	336.21	535.443	526.180	16.240	15.274	.2975	23.38	-4.60	-29.871	.0775
19	8.7199	308.08	135.27	336.47	535.834	526.607	16.261	15.293	.2976	23.71	-6.17	-37.525	.0775
20	8.8259	306.91	137.12	336.15	536.330	527.071	16.280	15.314	.2972	24.07	-7.76	-62.866	.0775
21	8.9340	305.15	139.04	335.33	536.737	527.583	16.297	15.335	.2963	24.58	-9.38	-1665.883	.0776

BLADE DATA

LOCAT-ION	BLADE-ANGLES SECTION	BLADE-ANGLES AN	REL FLOW ANGLE	DEVIATION INCIDENCE	LOSS COEFF	BLADE SPEED	RELATIVE MACH NO	RELATIVE VELOCITY	RELATIVE PRESSURE	RELATIVE TEMPERATURE	PRESSURE RATIO	DELTA T ON T	ISENTROPIC EFFICIENCY	POLYTROPIC EFFICIENCY
1	-60.252	10.492	-61.718	-1.407	-.0004	613.5	.4955	547.99	18.005	549.530	1.092	.025	1.0009	1.0009
2	-60.351	9.969	-61.796	-1.415	-.0002	623.0	.4960	559.84	18.116	550.495	1.093	.026	1.0004	1.0003
3	-60.529	9.051	-61.892	-1.363	.0001	632.4	.5065	571.63	18.227	551.460	1.093	.026	.9999	.9999
4	-60.692	7.841	-62.005	-1.313	.0002	641.7	.5170	583.33	18.339	552.426	1.093	.026	.9995	.9995
5	-60.846	6.617	-62.111	-1.266	.0003	650.8	.5273	594.89	18.451	553.394	1.093	.026	.9992	.9992
6	-60.975	5.577	-62.200	-1.224	.0004	659.9	.5374	606.23	18.565	554.364	1.093	.026	.9990	.9990
7	-61.098	4.763	-62.287	-1.189	.0005	668.8	.5473	617.28	18.679	555.337	1.094	.026	.9987	.9987
8	-61.233	4.187	-62.394	-1.161	.0006	677.7	.5569	628.00	18.795	556.315	1.094	.026	.9985	.9985
9	-61.376	3.762	-62.518	-1.141	.0008	686.5	.5661	638.32	18.911	557.298	1.094	.026	.9979	.9979
10	-61.520	3.358	-62.651	-1.130	.0032	695.3	.5742	647.50	19.018	558.290	1.095	.026	.9912	.9913
11	-61.662	2.906	-62.789	-1.128	.0055	704.0	.5820	656.38	19.127	559.294	1.096	.027	.9847	.9849
12	-61.799	2.402	-62.933	-1.134	.0078	712.8	.5895	664.98	19.238	560.310	1.097	.027	.9784	.9787
13	-61.931	2.089	-63.079	-1.148	.0100	721.6	.5969	673.29	19.351	561.343	1.098	.028	.9722	.9726
14	-62.056	1.827	-63.228	-1.172	.0121	730.4	.6040	681.35	19.466	562.386	1.099	.028	.9663	.9668
15	-62.175	1.696	-63.384	-1.209	.0153	739.2	.6099	688.21	19.579	563.450	1.100	.029	.9534	.9540
16	-62.290	1.690	-63.554	-1.264	.0202	748.1	.6139	693.12	19.648	564.537	1.102	.030	.9286	.9296
17	-62.409	1.764	-63.755	-1.346	.0355	757.2	.6178	697.85	19.729	565.549	1.103	.031	.9049	.9063
18	-62.543	1.829	-64.005	-1.462	.0405	766.3	.6231	704.14	19.837	566.790	1.105	.032	.8927	.8942
19	-62.696	1.336	-64.305	-1.609	.0450	775.6	.6285	710.56	19.950	567.960	1.107	.033	.8814	.8831
20	-62.868	1.749	-64.652	-1.764	.0499	785.0	.6339	716.90	20.064	569.164	1.108	.034	.8692	.8711
21	-63.056	1.554	-65.039	-1.984	.0555	794.6	.6390	723.11	20.177	570.407	1.10[illegible]	.035	.8593	.8574

STATION 5 INTEGRATED PERFORMANCE PRESSURE RATIO = 1.098 ISEN. EFF.= .952 POLY. EFF.= .953 DELTA T ON T = .028

STATION 6 FLOW FIELD DESCRIPTION

STREAM-LINE	RADIUS	VELOCITIES MERID	VELOCITIES TANGEN	VELOCITIES TOTAL	TEMPERATURES TOTAL	TEMPERATURES STATIC	PRESSURES TOTAL	PRESSURES STATIC	MACH NO	ANGLES WHIRL	ANGLES SLOPE	RADIUS OF CURVATURE	SPECIFIC WEIGHT
1	7.0734	292.07	186.83	[illegible]	537.966	528.115	16.709	15.659	.3062	32.61	27.37	4.302	.0791
2	7.1749	299.42	183.18	[illegible]	537.840	527.752	16.695	15.619	.3101	31.46	25.22	5.845	.0790
3	7.2685	305.85	180.24	[illegible]	537.786	527.459	16.687	15.587	.3138	30.51	23.04	8.451	.0789
4	7.3598	311.25	177.71	358.4[illegible]	537.754	527.229	16.682	15.562	.3168	29.72	20.84	13.655	.0788
5	7.4492	315.81	175.57	361.[illegible]	537.754	527.055	16.681	15.544	.3195	29.07	18.64	28.764	.0787
6	7.5371	319.84	173.94	364.[illegible]3	537.800	526.938	16.686	15.531	.3219	28.54	16.46	467.234	.0786
7	7.6239	323.52	172.88	366.[illegible]1	537.902	526.877	16.696	15.524	.3244	28.12	14.31	-40.842	.0786
8	7.7099	326.81	172.24	369.[illegible]2	538.047	526.864	16.711	15.522	.3267	27.79	12.20	-21.429	.0786
9	7.7951	329.55	172.00	371.74	538.233	526.909	16.730	15.525	.3287	27.56	10.13	-15.795	.0786
10	7.8802	330.99	173.36	373.64	538.502	527.163	16.750	15.532	.3303	27.64	8.11	-13.229	.0786
11	7.9653	332.13	174.88	375.35	538.995	527.450	16.772	15.543	.3318	27.77	6.14	-11.878	.0786
12	8.0507	333.03	175.56	376.94	539.409	527.767	16.797	15.557	.3331	27.93	4.22	-11.186	.0787
13	8.1364	333.73	178.38	378.41	539.845	528.112	16.824	15.574	.3342	28.12	2.36	-10.925	.0787
14	8.2227	334.27	180.24	379.75	540.292	528.478	16.852	15.592	.3353	28.33	.56	-11.004	.0787
15	8.3099	333.57	183.93	380.92	540.969	529.080	16.880	15.612	.3362	28.87	-1.15	-11.426	.0787
16	8.3983	330.70	190.93	381.86	542.062	530.115	16.907	15.633	.3367	30.00	-2.79	-12.320	.0787
17	8.4887	327.35	197.98	382.58	543.186	531.194	16.933	15.655	.3369	31.16	-4.28	-14.018	.0786
18	8.5808	325.28	201.67	382.73	543.913	531.912	16.956	15.677	.3369	31.88	-5.65	-17.218	.0786
19	8.6745	322.82	204.80	382.31	544.584	532.609	16.975	15.698	.3363	32.39	-6.96	-23.898	.0787
20	8.7701	319.75	207.93	381.41	545.269	533.351	16.989	15.719	.3353	33.03	-8.20	-44.624	.0786
21	8.8679	316.00	211.33	380.16	546.005	534.166	16.998	15.737	.3339	33.77	-9.38	1665.883	.0786

BLADE DATA

LOCAT -ION	BLADE-ANGLES SECTION	LEAN	REL FLOW ANGLE	DEVIATION INCIDENCE	LOSS COEFF	BLADE SPEED	RELATIVE MACH NO	RELATIVE VELOCITY	RELATIVE PRESSURE	RELATIVE TEMPERATURE	PRESSURE RATIO	DELTA T ON T	ISENTROPIC EFFICIENCY	POLYTROPIC EFFICIENCY
1	-54.590	3.732	-56.209	-1.393	-.0003	629.0	.4585	530.41	18.196	551.164	1.137	.037	1.0013	1.0013
2	-54.722	3.248	-56.451	-1.923	-.0003	638.2	.4813	544.66	18.297	552.055	1.136	.037	1.0005	1.0005
3	-54.576	2.471	-56.735	-1.859	.0001	646.5	.4928	557.61	18.398	552.331	1.135	.037	.9998	.9998
4	-55.079	1.515	-56.559	-1.791	.0004	654.6	.5034	569.47	18.498	553.796	1.135	.037	.9993	.9993
5	-55.309	.579	-57.036	-1.727	.0005	662.5	.5132	580.42	18.598	554.554	1.135	.037	.9989	.9989
6	-55.536	-.144	-57.207	-1.671	.0008	670.4	.5222	590.55	18.698	555.507	1.135	.037	.9986	.9986
7	-55.742	-.531	-57.366	-1.624	.0010	678.1	.5305	599.92	18.799	556.360	1.136	.037	.9982	.9982
8	-55.939	-.795	-57.525	-1.587	.0011	685.7	.5383	608.67	18.900	557.213	1.137	.037	.9979	.9980
9	-55.141	-.351	-57.701	-1.569	.0015	693.3	.5454	616.76	19.000	558.070	1.138	.038	.9971	.9971
10	-55.350	-.619	-57.934	-1.544	.0065	700.9	.5505	622.77	19.08	558.933	1.140	.038	.9877	.9880
11	-56.559	-.776	-58.039	-1.543	.0111	708.5	.5555	623.50	19.162	559.306	1.141	.039	.9789	.9793
12	-56.765	-.794	-58.312	-1.547	.0155	716.0	.5602	634.00	19.246	560.592	1.143	.040	.9784	.9789
13	-56.966	-.843	-58.533	-1.566	.0139	723.7	.5647	639.31	19.330	561.591	1.145	.041	.9619	.9625
14	-57.163	-.810	-58.752	-1.599	.0241	731.4	.5691	644.56	19.417	562.506	1.147	.042	.9538	.9547
15	-57.352	-.535	-59.001	-1.649	.0335	739.1	.5715	647.67	19.477	563.438	1.149	.043	.9362	.9374
16	-57.533	-.101	-59.253	-1.725	.0524	747.0	.5704	646.95	19.486	564.396	1.150	.045	.9027	.9046
17	-57.720	.393	-59.557	-1.837	.0712	755.5	.5590	646.10	19.494	565.383	1.152	.047	.8709	.8735
18	-57.922	.938	-59.917	-1.994	.0910	763.2	.5712	648.54	19.552	566.401	1.154	.049	.8542	.8571
19	-58.139	1.575	-60.333	-2.194	.0990	771.5	.5737	652.23	19.616	567.449	1.155	.050	.8386	.8419
20	-58.353	2.047	-60.799	-2.431	.0933	780.0	.5761	655.40	19.677	568.529	1.156	.051	.8218	.8254
21	-58.508	2.366	-61.309	-2.709	.1112	788.7	.5781	658.22	19.730	569.545	1.157	.053	.8027	.8067

STATION 6 INTEGRATED PERFORMANCE PRESSURE RATIO = 1.144 ISEN. EFF.= .934 POLY. EFF.= .935 DELTA T ON T = .042

STATION 7 FLOW FIELD DESCRIPTION

STREAM -LINE	RADIUS	VELOCITIES MERID	VELOCITIES TANGEN	VELOCITIES TOTAL	TEMPERATURES TOTAL	TEMPERATURES STATIC	PRESSURES TOTAL	PRESSURES STATIC	MACH NO	ANGLES WHIRL	ANGLES SLOPE	RADIUS OF CURVATURE	SPECIFIC WEIGHT
1	7.3120	371.59	270.57	459.74	547.525	530.209	17.778	15.879	.4053	36.05	26.61	-3.372	.0799
2	7.3818	373.37	269.79	460.64	547.716	530.332	17.797	15.890	.4060	35.85	23.80	-3.427	.0800
3	7.4505	374.97	269.72	461.91	547.991	530.502	17.825	15.905	.4071	35.73	21.12	-3.549	.0800
4	7.5193	376.25	269.96	463.02	548.265	530.701	17.856	15.925	.4080	35.65	18.57	-3.742	.0801
5	7.5874	377.07	269.86	463.63	548.532	530.918	17.885	15.947	.4085	35.59	16.14	-4.011	.0801
6	7.6555	377.55	269.71	464.01	548.784	531.145	17.913	15.970	.4087	35.54	13.82	-4.368	.0802
7	7.7233	377.45	269.55	464.14	549.034	531.385	17.940	15.994	.4087	35.50	11.60	-4.791	.0803
8	7.7924	376.15	269.42	464.31	549.288	531.527	17.969	[illegible]	.4088	35.47	9.48	-5.306	.0804
9	7.8613	378.37	269.53	464.55	549.571	531.892	17.998	[illegible]	.4089	35.46	7.45	-5.923	.0805
10	7.9309	376.68	271.72	464.62	550.098	532.414	18.026	16.070	.4087	35.79	5.51	-6.666	.0805
11	8.0014	375.43	273.83	464.72	550.629	532.938	18.055	16.097	.4086	36.11	3.65	-7.567	.0806
12	8.0730	373.94	275.97	464.74	551.159	533.466	18.083	16.124	.4084	36.43	1.87	-8.659	.0807
13	8.1450	372.32	277.99	464.65	551.692	534.005	18.111	16.151	.4082	36.75	.16	-9.958	.0807
14	8.2194	370.68	279.93	464.50	552.223	534.549	18.138	16.178	.4078	37.06	-1.48	-11.474	.0808
15	8.2947	360.75	284.63	464.24	553.098	535.444	18.163	16.206	.4073	37.82	-3.04	-13.206	.0808
16	8.3724	358.58	294.62	464.09	554.638	536.995	18.189	16.235	.4065	39.41	-4.47	-15.206	.0807
17	8.4530	349.88	305.13	464.24	556.278	538.625	18.219	16.266	.4061	41.09	-5.74	-17.774	.0806
18	8.5354	344.62	310.76	464.05	557.350	539.713	18.249	16.298	.4055	42.04	-6.85	-21.747	.0806
19	8.6222	339.29	315.36	463.62	558.390	540.795	18.279	16.332	.4047	42.96	-7.84	-29.421	.0806
20	8.7106	333.25	321.64	463.15	559.518	541.951	18.308	16.365	.4039	43.98	-8.68	-52.060	.0806
21	8.8019	326.24	323.27	462.51	560.796	543.254	18.337	16.398	.4031	45.18	-9.37	*956875.344	.0805

BLADE DATA

LOCAT -ION	BLADE-ANGLES SECTION	LEAN	REL FLOW ANGLE	DEVIATION INCIDENCE	LOSS COEFF	BLADE SPEED	RELATIVE MACH NO	RELATIVE VELOCITY	RELATIVE PRESSURE	RELATIVE TEMPERATURE	PRESSURE RATIO	DELTA T ON T	ISENTROPIC EFFICIENCY	POLYTROPIC EFFICIENCY
1	-42.577	-5.952	-45.617	-3.040	-.0013	650.3	.4685	531.40	18.451	553.342	1.210	.056	1.0013	1.0013
2	-43.093	-5.844	-46.010	-2.917	-.0005	656.5	.4739	537.58	18.526	554.006	1.211	.056	1.0005	1.0005
3	-43.548	-5.693	-46.343	-2.795	.0002	662.7	.4787	543.16	18.602	554.569	1.213	.056	.9998	.9998
4	-43.997	-5.483	-46.675	-2.678	.0007	668.8	.4832	548.36	18.679	555.333	1.215	.057	.9993	.9993
5	-44.474	-5.197	-47.044	-2.570	.0010	674.8	.4875	553.35	18.756	556.000	1.217	.058	.9989	.9989
6	-44.965	-4.827	-47.441	-2.475	.0012	680.9	.4917	558.24	18.835	556.573	1.219	.058	.9986	.9987
7	-45.453	-4.368	-47.849	-2.395	.0015	687.0	.4958	563.04	18.915	557.353	1.221	.059	.9982	.9983
8	-45.916	-3.815	-48.248	-2.332	.0017	693.1	.4999	567.87	18.996	558.042	1.223	.059	.9980	.9981
9	-46.347	-3.197	-48.573	-2.286	.0023	699.2	.5039	572.53	19.077	558.741	1.225	.060	.9972	.9973
10	-46.750	-2.576	-49.008	-2.259	.0097	705.4	.5055	574.55	19.128	559.453	1.227	.061	.9881	.9885
11	-47.134	-2.021	-49.384	-2.250	.0167	711.7	.5071	576.72	19.181	560.180	1.229	.062	.9799	.9801
12	-47.513	-1.590	-49.773	-2.260	.0233	718.0	.5083	579.01	19.235	560.325	1.230	.063	.9711	.9719
13	-47.888	-1.241	-50.176	-2.288	.0299	724.5	.5107	581.37	19.291	561.588	1.232	.064	.9626	.9637
14	-48.255	-.890	-50.591	-2.336	.0362	731.1	.5125	583.88	19.350	562.470	1.234	.065	.9543	.9557
15	-48.602	-.448	-51.014	-2.412	.0504	737.8	.5114	582.94	19.366	563.276	1.236	.066	.9365	.9383
16	-48.928	.123	-51.453	-2.525	.0787	744.7	.5041	575.43	19.306	564.114	1.238	.069	.9025	.9054
17	-49.239	.789	-51.930	-2.691	.1063	751.8	.4963	567.42	19.243	564.992	1.240	.072	.8699	.8730
18	-49.538	1.495	-52.461	-2.923	.1215	759.3	.4942	565.60	19.254	565.910	1.242	.075	.8526	.8570
19	-49.826	2.170	-53.041	-3.216	.1352	766.9	.4925	564.31	19.273	566.363	1.244	.077	.8366	.8418
20	-50.104	2.732	-53.656	-3.562	.1499	774.7	.4905	562.46	19.286	567.355	1.246	.079	.8196	.8251
21	-50.376	3.083	-54.334	-3.958	.1667	782.9	.4873	559.54	19.285	568.390	1.248	.081	.8006	.8067

STATION 7 INTEGRATED PERFORMANCE PRESSURE RATIO = 1.230 ISEN. EFF.= .934 POLY. EFF.= .936 DELTA T ON T = .069

STATION 8 FLOW FIELD DESCRIPTION

STREAM -LINE	RADIUS	VELOCITIES MERID	VELOCITIES TANGEN	VELOCITIES TOTAL	TEMPERATURES TOTAL	TEMPERATURES STATIC	PRESSURES TOTAL	PRESSURES STATIC	MACH NO	ANGLES WHIRL	ANGLES SLOPE	RADIUS OF CURVATURE	SPECIFIC WEIGHT
1	7.4732	457.07	394.37	603.69	561.672	531.821	19.448	16.051	.5314	40.79	16.56	-1.883	.0805
2	7.5278	450.00	394.14	598.20	561.925	532.615	19.475	16.132	.5262	41.21	14.89	-2.242	.0808
3	7.5775	444.30	393.73	593.65	562.165	533.301	19.501	16.202	.5218	41.55	13.32	-2.712	.0811
4	7.6285	439.34	393.11	589.91	562.389	533.857	19.526	16.263	.5183	41.79	11.83	-3.343	.0813
5	7.6807	436.47	392.23	586.81	562.589	534.387	19.548	16.315	.5153	41.94	10.39	-4.225	.0815
6	7.7339	433.99	391.07	584.19	562.762	534.911	19.568	16.359	.5128	42.02	8.99	-5.531	.0816
7	7.7881	432.18	389.60	581.87	562.905	535.175	19.584	16.397	.5106	42.03	7.63	-7.644	.0818
8	7.8434	431.02	387.74	579.75	563.006	535.479	19.595	16.428	.5086	41.97	6.28	-11.571	.0819
9	7.8998	430.15	385.72	577.77	563.091	535.752	19.601	16.454	.5067	41.88	4.95	-21.114	.0820
10	7.9573	426.71	385.75	575.23	563.419	536.320	19.593	16.475	.5042	42.11	3.61	-71.222	.0820
11	8.0153	423.79	385.67	573.03	563.741	536.851	19.586	16.493	.5020	42.30	2.28	76.105	.0820
12	8.0768	421.29	385.62	571.13	564.074	537.361	19.579	16.508	.5001	42.47	.94	28.835	.0820
13	8.1387	419.06	385.67	569.52	564.428	537.865	19.573	16.521	.4985	42.62	-.40	19.327	.0820
14	8.2021	417.05	385.69	568.05	564.786	538.360	19.567	16.533	.4970	42.76	-1.73	15.345	.0819
15	8.2674	411.04	388.95	565.89	565.545	539.321	19.550	16.544	.4947	43.42	-3.05	13.460	.0819
16	8.3358	397.24	398.60	562.74	567.103	541.172	19.518	16.556	.4911	45.10	-4.34	12.944	.0816
17	8.4082	382.20	409.15	559.83	568.815	543.143	19.494	16.572	.4877	46.95	-5.55	13.664	.0814
18	8.4846	373.49	413.94	557.53	569.863	544.412	19.485	16.593	.4851	47.94	-6.66	15.926	.0813
19	8.5644	364.87	418.87	555.50	570.959	545.593	19.486	16.618	.4828	48.94	-7.70	21.676	.0813
20	8.6480	355.09	425.41	554.14	572.291	547.151	19.500	16.650	.4809	50.15	-8.63	41.538	.0812
21	8.7359	343.23	434.15	553.44	573.947	548.872	19.527	16.688	.4796	51.67	-9.37	*516564.766	.0811

BLADE DATA

LOCAT -ION	BLADE-ANGLES SECTION	LEAN	REL FLOW ANGLE	DEVIATION INCIDENCE	LOSS COEFF	BLADE SPEED	RELATIVE MACH NO	RELATIVE VELOCITY	RELATIVE PRESSURE	RELATIVE TEMPERATURE	PRESSURE RATIO	DELTA T ON T	ISENTROPIC EFFICIENCY	POLYTROPIC EFFICIENCY
1	-25.429	-6.276	-30.650	-5.220	-.0017	665.2	.4577	531.29	18.641	554.344	1.323	.083	1.0012	1.0011
2	-26.466	-5.839	-31.467	-5.000	-.0006	669.5	.4640	527.58	18.693	555.416	1.325	.083	1.0004	1.0004
3	-27.454	-5.362	-32.241	-4.787	.0002	674.0	.4617	525.30	18.748	555.903	1.327	.084	.9998	.9998
4	-28.391	-4.714	-32.978	-4.585	.0009	678.5	.4605	524.32	18.805	556.405	1.329	.084	.9993	.9994
5	-29.279	-3.978	-33.683	-4.404	.0013	683.1	.4605	524.53	18.865	556.922	1.330	.085	.9998	.9998
6	-30.122	-3.133	-34.363	-4.245	.0015	687.9	.4615	525.77	18.927	557.453	1.332	.085	.9987	.9988
7	-30.928	-2.402	-35.042	-4.115	.0020	692.7	.4632	527.87	18.990	557.999	1.333	.085	.9984	.9984
8	-31.703	-1.647	-35.714	-4.011	.0022	697.6	.4657	530.84	19.056	558.559	1.333	.085	.9981	.9982
9	-32.443	-.944	-36.380	-3.937	.0031	702.5	.4685	534.29	19.121	559.133	1.334	.086	.9973	.9975
10	-33.144	-.302	-37.038	-3.894	.0123	707.7	.4685	534.56	19.145	559.724	1.333	.086	.9887	.9891
11	-33.800	.265	-37.682	-3.862	.0222	713.0	.4691	535.47	19.173	560.335	1.333	.087	.9802	.9810
12	-34.402	.743	-38.303	-3.901	.0311	718.4	.4701	536.85	19.202	560.965	1.332	.088	.9718	.9729
13	-34.954	1.140	-38.906	-3.951	.0393	723.9	.4714	538.51	19.232	561.515	1.332	.088	.9631	.9646
14	-35.467	1.479	-39.503	-4.037	.0483	729.5	.4729	540.51	19.264	562.286	1.331	.089	.9546	.9564
15	-35.952	1.737	-40.121	-4.169	.0673	735.3	.4699	537.53	19.240	562.983	1.330	.090	.9361	.9387
16	-35.428	2.039	-40.793	-4.365	.1053	741.4	.4579	524.71	19.111	563.717	1.328	.093	.9007	.9046
17	-35.893	2.420	-41.547	-4.654	.1427	747.8	.4448	510.68	18.979	564.503	1.327	.097	.8660	.8712
18	-37.317	2.731	-42.372	-5.055	.1523	754.6	.4398	505.54	18.947	565.339	1.326	.099	.8468	.8526
19	-37.660	3.006	-43.219	-5.560	.1804	761.7	.4351	500.69	18.923	566.220	1.326	.101	.8291	.8358
20	-37.914	3.220	-44.071	-6.157	.1999	769.2	.4289	494.23	18.891	567.151	1.327	.103	.8106	.8188
21	-38.132	3.347	-44.967	-6.835	.2223	777.0	.4204	485.13	18.841	568.141	1.329	.107	.7984	.7986

STATION 9 INTEGRATED PERFORMANCE PRESSURE RATIO = 1.330 ISEN. EFF.= .935 POLY. EFF.= .937 DELTA T ON T = .090

STATION 9 FLOW FIELD DESCRIPTION

STREAM -LINE	RADIUS	VELOCITIES MERID	TANGEN	TOTAL	TEMPERATURES TOTAL	STATIC	PRESSURES TOTAL	STATIC	MACH NO	ANGLES WHIRL	SLOPE	RADIUS OF CURVATURE	SPECIFIC WEIGHT
1	7.5499	450.09	442.59	631.81	567.379	534.687	20.154	16.358	.5547	44.47	8.54	-5.825	.0816
2	7.5946	447.78	440.85	628.37	567.474	535.138	20.161	16.402	.5514	44.55	8.25	-7.358	.0818
3	7.6402	445.40	438.99	625.33	567.560	535.532	20.167	16.442	.5486	44.58	7.87	-9.178	.0819
4	7.6863	443.62	437.03	622.71	567.635	535.880	20.173	16.476	.5461	44.57	7.40	-11.354	.0820
5	7.7341	442.30	434.91	620.30	567.700	536.190	20.179	16.508	.5438	44.52	6.87	-14.048	.0822
6	7.7822	441.33	432.76	618.14	567.762	536.471	20.185	16.537	.5418	44.44	6.28	-17.680	.0823
7	7.8310	440.92	431.00	616.53	567.868	536.736	20.196	16.563	.5402	44.35	5.64	-23.319	.0823
8	7.8804	440.75	429.15	615.19	567.966	536.974	20.206	16.588	.5389	44.23	4.96	-34.204	.0824
9	7.9303	440.73	427.59	614.05	568.099	537.221	20.217	16.610	.5378	44.13	4.23	-66.960	.0825
10	7.9815	437.94	433.44	614.03	568.748	537.870	20.237	16.630	.5375	44.51	3.46	1658.364	.0825
11	8.0333	435.48	433.20	614.25	569.395	538.493	20.258	16.649	.5373	44.85	2.64	56.152	.0825
12	8.0861	432.55	434.73	613.25	569.909	539.113	20.260	16.665	.5362	45.14	1.77	27.229	.0825
13	8.1401	427.83	433.33	608.95	570.085	539.721	20.218	16.678	.5321	45.37	.85	17.669	.0825
14	8.1953	423.40	431.83	604.81	570.260	540.308	20.176	16.689	.5282	45.57	-.09	12.997	.0824
15	8.2521	413.95	434.99	600.49	570.991	541.466	20.124	16.697	.5239	46.42	-1.08	10.236	.0823
16	8.3116	393.97	446.50	595.45	572.761	543.730	20.057	16.704	.5184	48.58	-2.14	8.554	.0820
17	8.3753	371.32	453.42	539.94	574.627	546.135	19.986	16.713	.5125	50.99	-3.28	7.678	.0817
18	8.4430	358.42	453.69	586.05	575.726	547.508	19.944	16.724	.5084	52.30	-4.50	7.368	.0815
19	8.5141	345.25	463.45	581.93	576.796	549.074	19.903	16.737	.5042	53.61	-5.82	7.472	.0813
20	8.5893	329.02	473.90	576.92	577.990	550.745	19.857	16.755	.4991	55.23	-7.26	8.657	.0812
21	8.6699	306.82	480.56	570.15	579.386	552.778	19.803	16.784	.4923	57.44	-8.95	20.749	.0810

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BLADE DATA

LOCAT -ION	BLADE-ANGLES SECTION	LEAN	REL FLOW ANGLE	DEVIATION INCIDENCE	LOSS COEFF	BLADE SPEED	RELATIVE MACH NO	RELATIVE VELOCITY	RELATIVE PRESSURE	RELATIVE TEMPERATURE	PRESSURE RATIO	DELTA T ON T	ISENTROPIC EFFICIENCY	POLYTROPIC EFFICIENCY
1	-11.816	2.339	-26.917	-15.131	-.0021	671.5	.4439	505.67	18.724	555.532	1.371	.094	1.0013	1.0012
2	-12.945	2.643	-27.654	-14.710	-.0009	675.5	.4435	505.53	18.771	556.071	1.372	.094	1.0085	1.0085
3	-14.065	2.932	-28.373	-14.268	.0003	679.5	.4440	505.21	18.821	556.521	1.372	.094	.9998	.9998
4	-15.212	3.249	-29.077	-13.864	.0011	683.7	.4451	507.59	18.873	556.383	1.373	.094	.9993	.9993
5	-15.303	3.573	-29.768	-13.465	.0015	687.9	.4467	509.54	18.927	557.456	1.373	.094	.9989	.9989
6	-17.331	3.881	-30.443	-13.113	.0020	692.2	.4487	511.96	18.983	557.339	1.373	.095	.9986	.9986
7	-18.271	4.152	-31.055	-12.784	.0025	696.5	.4510	514.69	19.040	558.432	1.374	.095	.9982	.9982
8	-19.118	4.376	-31.555	-12.537	.0029	700.9	.4535	517.82	19.099	558.336	1.375	.095	.9979	.9980
9	-19.882	4.557	-32.222	-12.340	.0038	705.4	.4563	520.96	19.155	559.449	1.376	.095	.9970	.9971
10	-20.576	4.700	-32.542	-11.966	.0161	709.9	.4547	519.50	19.160	559.973	1.377	.097	.9873	.9878
11	-21.212	4.811	-32.861	-11.649	.0277	714.5	.4535	518.44	19.167	560.511	1.378	.098	.9778	.9788
12	-21.804	4.893	-33.332	-11.528	.0388	719.2	.4525	517.71	19.175	561.063	1.379	.099	.9684	.9698
13	-22.356	4.945	-34.192	-11.836	.0495	724.0	.4520	517.23	19.183	561.530	1.376	.099	.9586	.9604
14	-22.867	4.961	-35.051	-12.184	.0503	728.9	.4517	517.20	19.192	562.214	1.373	.099	.9487	.9510
15	-23.334	4.930	-35.538	-12.504	.0841	734.0	.4455	510.63	19.129	562.818	1.369	.101	.9276	.9308
16	-23.759	4.842	-36.016	-12.857	.1313	739.3	.4273	490.83	18.934	563.457	1.365	.104	.8873	.8921
17	-24.142	4.682	-37.653	-13.510	.1793	744.9	.4074	469.00	18.733	564.145	1.360	.108	.8474	.8539
18	-24.471	4.457	-38.711	-14.240	.2023	750.9	.3985	459.32	18.654	564.883	1.357	.110	.8252	.8325
19	-24.727	4.186	-39.914	-15.185	.2255	757.3	.3900	450.14	18.584	565.564	1.354	.112	.8042	.8124
20	-24.897	3.897	-41.399	-16.502	.2499	764.0	.3794	438.62	18.502	566.496	1.351	.114	.7817	.7908
21	-24.964	3.617	-43.441	-18.477	.2773	771.1	.3549	422.57	18.398	567.397	1.347	.117	.7565	.7665

STATION 9 INTEGRATED PERFORMANCE PRESSURE RATIO = 1.369 ISEN. EFF.= .926 POLY. EFF.= .929 DELTA T ON T = .101

STATION 10 FLOW FIELD DESCRIPTION

STREAM -LINE	RADIUS	VELOCITIES MERID	TANGEN	TOTAL	TEMPERATURES TOTAL	STATIC	PRESSURES TOTAL	STATIC	MACH NO	ANGLES WHIRL	SLOPE	RADIUS OF CURVATURE	SPECIFIC WEIGHT
1	7.5746	449.67	441.15	629.93	567.379	534.882	20.154	16.379	.5529	44.45	7.82	9.349	.0817
2	7.6231	454.11	439.20	631.75	567.474	534.789	20.161	16.365	.5545	44.04	7.78	11.008	.0817
3	7.6718	459.47	437.19	634.23	567.560	534.618	20.167	16.343	.5568	43.58	7.51	14.091	.0816
4	7.7203	465.13	435.11	636.92	567.635	534.414	20.173	16.328	.5593	43.03	7.11	18.125	.0815
5	7.7684	470.62	432.99	639.50	567.700	534.208	20.179	16.295	.5617	42.62	6.64	22.677	.0814
6	7.8162	475.65	430.88	641.90	567.762	534.029	20.185	16.274	.5638	42.17	6.12	27.248	.0813
7	7.8636	480.21	429.21	644.07	567.868	533.895	20.196	16.258	.5658	41.79	5.58	31.028	.0813
8	7.9108	48[illegible].21	427.50	645.92	567.966	533.799	20.206	16.246	.5675	41.44	5.03	32.988	.0812
9	7.9580	487.54	425.11	647.51	568.099	533.763	20.217	16.238	.5689	41.15	4.47	32.442	.0812
10	8.0054	487.85	429.16	649.75	568.748	534.175	20.237	16.232	.5707	41.34	3.92	30.119	.0811
11	8.0533	487.48	432.12	651.73	569.395	534.611	20.258	16.230	.5722	41.53	3.35	26.865	.0810
12	8.1018	486.81	433.99	652.11	569.909	535.085	20.250	16.231	.5723	41.71	2.77	23.515	.0809
13	8.1509	483.35	432.76	648.73	570.085	535.616	20.218	16.237	.5691	41.84	2.17	20.475	.0809
14	8.2010	479.20	431.56	644.90	570.260	536.203	20.176	16.247	.5653	42.01	1.55	17.882	.0809
15	8.2523	469.45	434.97	640.06	570.991	537.444	20.124	16.265	.5605	42.81	.87	15.675	.0808
16	8.3061	449.45	446.80	633.76	572.761	539.874	20.057	16.291	.5537	44.83	.11	13.678	.0805
17	8.3635	425.69	459.06	626.05	574.627	542.536	19.986	16.329	.5455	47.16	-.81	11.740	.0803
18	8.4250	408.91	464.68	618.93	575.726	544.360	19.944	16.377	.5386	48.65	-1.91	9.826	.0803
19	8.4907	390.70	469.74	610.99	576.796	546.235	19.903	16.435	.5307	50.25	-3.15	7.846	.0803
20	8.5618	359.54	475.41	602.15	577.990	548.305	19.857	16.496	.5220	52.14	-4.57	5.588	.0803
21	8.6399	345.92	482.23	593.47	579.386	550.555	19.803	16.548	.5135	54.35	-6.18	3.053	.0802

STATION 11 FLOW FIELD DESCRIPTION

STREAM-LINE	RADIUS	VELOCITIES MERID	VELOCITIES TANGEN	VELOCITIES TOTAL	TEMPERATURES TOTAL	TEMPERATURES STATIC	PRESSURES TOTAL	PRESSURES STATIC	MACH NO	ANGLES WHIRL	ANGLES SLOPE	RADIUS OF CURVATURE	SPECIFIC WEIGHT
1	7.6199	478.73	439.53	649.22	567.379	532.860	20.154	16.162	.5709	42.49	9.06	26.367	.0809
2	7.6778	507.44	436.08	669.07	567.474	530.811	20.161	15.941	.5895	40.57	8.50	-208.687	.0801
3	7.7315	532.31	433.61	686.69	567.560	528.940	20.167	15.741	.6061	39.18	7.80	-31.987	.0794
4	7.7813	551.63	431.70	700.63	567.635	527.430	20.173	15.581	.6193	38.04	7.08	-20.945	.0788
5	7.8233	566.55	429.67	711.06	567.700	526.283	20.179	15.461	.6292	37.18	6.38	-17.446	.0784
6	7.8736	577.64	427.74	718.77	567.762	525.447	20.185	15.373	.6365	36.52	5.73	-16.322	.0781
7	7.9177	586.03	425.28	724.67	567.868	524.855	20.196	15.311	.6421	36.03	5.15	-16.549	.0778
8	7.9611	592.23	424.30	728.83	567.966	524.458	20.206	15.269	.6460	35.65	4.65	-17.902	.0777
9	8.0041	596.45	423.00	731.61	568.099	524.259	20.217	15.244	.6485	35.39	4.20	-20.559	.0776
10	8.0470	597.12	420.94	734.05	568.748	524.615	20.237	15.234	.6505	35.56	3.80	-25.084	.0775
11	8.0901	596.50	430.16	735.43	569.395	525.097	20.258	15.238	.6514	35.80	3.43	-33.147	.0774
12	8.1334	594.07	432.21	734.65	569.909	525.705	20.260	15.253	.6504	36.04	3.07	-51.042	.0774
13	8.1773	588.35	431.37	729.96	570.085	526.445	20.218	15.280	.6458	36.22	2.72	-123.252	.0775
14	8.2219	582.39	430.49	724.22	570.260	527.303	20.176	15.319	.6402	36.47	2.35	237.553	.0775
15	8.2675	570.92	434.15	717.18	570.991	528.867	20.124	15.371	.6330	37.26	1.94	59.876	.0776
16	8.3150	549.90	440.33	705.16	572.761	531.594	20.057	15.440	.6234	39.07	1.41	35.958	.0775
17	8.3653	523.85	458.97	696.43	574.627	534.907	19.986	15.536	.6113	41.22	.70	27.799	.0775
18	8.4190	500.14	455.01	682.92	575.726	537.540	19.944	15.667	.5979	42.92	-.22	24.976	.0778
19	8.4773	459.65	470.49	664.92	576.796	540.598	19.903	15.846	.5805	45.04	-1.36	27.237	.0782
20	8.5425	428.62	470.48	640.89	577.990	544.363	19.857	16.082	.5576	48.03	-2.74	57.783	.0788
21	8.6199	373.04	483.35	610.56	579.386	548.371	19.503	16.370	.5291	52.34	-4.27	-27.461	.0796

BLADE DATA

LOCAT-ION	BLADE-ANGLES SECTION	BLADE-ANGLES LEAN	REL FLOW ANGLE	DEVIATION INCIDENCE	LOSS COEFF	BLADE SPEED	RELATIVE MACH NO	RELATIVE VELOCITY	RELATIVE PRESSURE	RELATIVE TEMPERATURE	PRESSURE RATIO	DELTA T ON T	ISENTROPIC EFFICIENCY	POLYTROPIC EFFICIENCY
1	48.917	-39.941	42.490	-6.327	0.0000	0.0	.5709	649.22	20.154	567.379	1.371	.094	1.0013	1.0012
2	48.017	-36.706	40.675	-7.342	0.0000	0.0	.5895	669.07	20.161	567.474	1.372	.094	1.0005	1.0005
3	47.295	-33.321	39.179	-8.116	0.0000	0.0	.6061	686.69	20.167	567.560	1.372	.094	.9998	.9998
4	46.773	-29.899	38.036	-8.737	0.0000	0.0	.6193	700.63	20.173	567.635	1.373	.094	.9993	.9993
5	46.357	-26.432	37.176	-9.181	0.0000	0.0	.6292	711.06	20.179	567.700	1.373	.094	.9989	.9989
6	46.006	-23.117	36.520	-9.486	0.0000	0.0	.6365	718.77	20.185	567.762	1.373	.095	.9986	.9986
7	45.680	-19.855	36.032	-9.648	0.0000	0.0	.6421	724.67	20.196	567.868	1.374	.095	.9982	.9982
8	45.371	-16.630	35.652	-9.720	0.0000	0.0	.6460	728.83	20.206	567.966	1.375	.095	.9979	.9980
9	45.092	-13.233	35.386	-9.706	0.0000	0.0	.6485	731.61	20.217	568.099	1.376	.095	.9970	.9971
10	44.858	-9.548	35.565	-9.293	0.0000	0.0	.6505	734.05	20.237	568.748	1.377	.097	.9873	.9878
11	44.692	-5.619	35.797	-8.855	0.0000	0.0	.6514	735.43	20.258	569.395	1.378	.098	.9778	.9788
12	44.623	-1.801	36.037	-8.566	0.0000	0.0	.6504	734.65	20.260	569.909	1.379	.099	.9684	.9698
13	44.569	1.624	36.224	-8.445	0.0000	0.0	.6458	729.96	20.218	570.085	1.375	.099	.9586	.9604
14	44.798	5.023	36.471	-8.327	0.0000	0.0	.6402	724.22	20.176	570.260	1.373	.099	.9487	.9510
15	44.959	9.197	37.258	-7.701	0.0000	0.0	.6330	717.18	20.124	570.991	1.369	.101	.9276	.9308
16	45.130	14.921	39.070	-6.061	0.0000	0.0	.6234	705.16	20.057	572.761	1.365	.104	.8873	.8921
17	45.455	21.940	41.223	-4.232	0.0000	0.0	.6113	695.48	19.986	574.627	1.360	.108	.8474	.8539
18	46.148	29.309	42.915	-3.233	0.0000	0.0	.5979	682.92	19.944	575.726	1.357	.110	.8252	.8325
19	47.296	36.344	45.038	-2.258	0.0000	0.0	.5805	664.92	19.903	576.796	1.354	.112	.8042	.8124
20	48.826	42.294	45.027	-.799	0.0000	0.0	.5575	640.89	19.857	577.990	1.351	.114	.7817	.7908
21	50.914	46.652	52.340	1.526	0.0000	0.0	.5291	610.56	19.503	579.386	1.347	.117	.7565	.7665

STATION 11 INTEGRATED PERFORMANCE PRESSURE RATIO = 1.369 ISEN. EFF.= .926 POLY. EFF.= .929 DELTA T ON T = .101

STATION 12 FLOW FIELD DESCRIPTION

STREAM -LINE	RADIUS	VELOCITIES MERID	VELOCITIES TANGEN	VELOCITIES TOTAL	TEMPERATURES TOTAL	TEMPERATURES STATIC	PRESSURES TOTAL	PRESSURES STATIC	MACH NO	ANGLES WHIRL	ANGLES SLOPE	RADIUS OF CURVATURE	SPECIFIC WEIGHT
1	7.7150	734.20	473.30	873.54	567.379	504.860	20.086	13.326	.7891	32.81	5.21	-3.633	.0704
2	7.7547	730.02	466.96	866.59	567.474	505.947	20.090	13.421	.7820	32.61	4.37	-3.682	.0708
3	7.7942	725.73	459.56	859.05	567.560	507.101	20.093	13.524	.7743	32.34	3.60	-3.736	.0712
4	7.8334	721.39	451.61	851.09	567.635	508.292	20.094	13.630	.7662	32.05	2.91	-3.862	.0716
5	7.8726	716.54	443.96	842.92	567.700	509.491	20.093	13.737	.7580	31.78	2.34	-4.058	.0719
6	7.9119	710.99	437.11	834.61	567.762	510.695	20.087	13.842	.7496	31.58	1.88	-4.318	.0723
7	7.9512	705.47	431.21	826.82	567.868	511.864	20.054	13.942	.7418	31.43	1.55	-4.638	.0727
8	7.9909	700.21	425.66	819.44	567.966	512.958	20.080	14.036	.7344	31.30	1.32	-5.018	.0730
9	8.0312	695.64	420.54	812.87	568.099	513.970	20.081	14.122	.7278	31.15	1.20	-5.470	.0733
10	8.0719	692.27	416.40	807.85	568.748	515.287	20.092	14.201	.7223	31.03	1.14	-6.035	.0735
11	8.1132	689.17	413.05	803.47	569.395	516.514	20.104	14.271	.7176	30.94	1.13	-6.771	.0737
12	8.1551	685.59	410.32	799.00	569.909	517.516	20.104	14.333	.7128	30.90	1.16	-7.753	.0739
13	8.1976	680.69	407.71	793.45	570.085	518.517	20.078	14.387	.7073	30.92	1.20	-9.113	.0740
14	8.2408	676.02	405.94	788.53	570.260	519.330	20.052	14.432	.7023	30.98	1.25	-11.120	.0742
15	8.2847	671.73	404.94	784.34	570.991	520.602	20.021	14.468	.6978	31.08	1.27	-14.580	.0742
16	8.3293	667.14	404.93	780.41	572.761	522.879	19.967	14.494	.6928	31.26	1.22	-23.242	.0740
17	8.3749	662.15	407.13	777.33	574.627	525.142	19.911	14.507	.6885	31.58	1.04	-97.303	.0737
18	8.4216	657.55	412.80	776.42	575.726	526.359	19.876	14.502	.6869	32.12	.69	36.143	.0735
19	8.4697	653.38	421.52	777.55	576.795	527.285	19.844	14.473	.6873	32.83	.12	14.175	.0732
20	8.5199	649.93	432.42	780.63	577.990	528.081	19.806	14.417	.6896	33.63	-.75	8.498	.0729
21	8.5730	646.72	445.47	785.35	579.386	528.881	19.762	14.340	.6932	34.56	-2.03	5.947	.0723

BLADE DATA

LOCAT -ION	BLADE-ANGLES SECTION	BLADE-ANGLES LEAN	REL FLOW ANGLE	DEVIATION INCIDENCE	LOSS COEFF	BLADE SPEED	RELATIVE MACH NO	RELATIVE VELOCITY	RELATIVE PRESSURE	RELATIVE TEMPERATURE	PRESSURE RATIO	DELTA T ON T	ISENTROPIC EFFICIENCY	POLYTROPIC EFFICIENCY
1	31.959	-24.847	32.808	.849	.0163	0.0	.7891	873.54	20.086	567.379	1.367	.094	.9902	.9906
2	31.750	-23.321	32.605	.855	.0167	0.0	.7820	866.59	20.090	567.474	1.367	.094	.9889	.9894
3	31.475	-21.309	32.341	.866	.0168	0.0	.7743	859.05	20.093	567.560	1.367	.094	.9876	.9881
4	31.166	-19.001	32.048	.882	.0173	0.0	.7562	851.09	20.094	567.535	1.367	.094	.9862	.9868
5	30.879	-16.625	31.782	.903	.0183	0.0	.7580	842.92	20.093	567.700	1.367	.094	.9848	.9854
6	30.658	-14.375	31.583	.925	.0204	0.0	.7496	834.61	20.087	567.762	1.367	.095	.9825	.9833
7	30.488	-12.248	31.435	.947	.0230	0.0	.7418	826.82	20.084	567.868	1.367	.095	.9799	.9807
8	30.326	-10.150	31.295	.969	.0255	0.0	.7344	819.44	20.080	567.966	1.366	.095	.9773	.9783
9	30.165	-8.034	31.155	.989	.0275	0.0	.7278	812.87	20.081	568.099	1.366	.095	.9748	.9759
10	30.019	-5.872	31.027	1.008	.0291	0.0	.7223	807.85	20.092	568.748	1.367	.097	.9640	.9656
11	29.912	-3.731	30.935	1.024	.0307	0.0	.7175	803.47	20.104	569.395	1.368	.098	.9539	.9559
12	29.863	-1.662	30.900	1.038	.0312	0.0	.7128	799.00	20.104	569.909	1.368	.099	.9448	.9464
13	29.873	.412	30.920	1.047	.0283	0.0	.7073	793.45	20.078	570.085	1.366	.099	.9368	.9395
14	29.931	2.667	30.984	1.053	.0254	0.0	.7023	788.53	20.052	570.260	1.364	.099	.9296	.9326
15	30.029	5.236	31.083	1.053	.0219	0.0	.6978	784.34	20.021	570.991	1.362	.101	.9117	.9154
16	30.206	8.352	31.257	1.051	.0195	0.0	.6928	780.41	19.957	572.761	1.359	.104	.8739	.8792
17	30.536	11.689	31.585	1.048	.0169	0.0	.6885	777.33	19.911	574.527	1.355	.108	.8366	.8434
18	31.075	15.884	32.124	1.049	.0159	0.0	.6869	776.42	19.876	575.726	1.353	.110	.8155	.8232
19	31.774	20.122	32.827	1.053	.0147	0.0	.6873	777.55	19.844	576.796	1.350	.112	.7959	.8044
20	32.573	24.292	33.635	1.062	.0135	0.0	.6896	780.69	19.806	577.990	1.348	.114	.7748	.7840
21	33.478	28.225	34.557	1.079	.0119	0.0	.6932	785.35	19.762	579.386	1.345	.117	.7510	.7612

STATION 12 INTEGRATED PERFORMANCE PRESSURE RATIO = 1.362 ISEN. EFF.= .910 POLY. EFF.= .914 DELTA T ON T = .101

STATION 13 FLOW FIELD DESCRIPTION

STREAM -LINE	RADIUS	VELOCITIES MERID	VELOCITIES TANGEN	VELOCITIES TOTAL	TEMPERATURES TOTAL	TEMPERATURES STATIC	PRESSURES TOTAL	PRESSURES STATIC	MACH NO	ANGLES WHIRL	ANGLES SLOPE	RADIUS OF CURVATURE	SPECIFIC WEIGHT
1	7.7230	631.05	215.34	714.43	567.379	525.573	20.021	15.298	.6326	17.58	-2.23	-5.196	.0777
2	7.7571	670.27	211.90	702.94	567.474	527.004	20.018	15.433	.6215	17.54	-2.36	-5.882	.0781
3	7.7921	659.75	208.25	691.84	567.560	528.358	20.015	15.562	.6110	17.52	-2.44	-6.763	.0786
4	7.8279	649.61	205.06	681.20	567.635	529.530	20.009	15.682	.6008	17.52	-2.48	-7.823	.0790
5	7.8647	639.93	202.01	671.06	567.700	530.819	20.002	15.794	.5912	17.52	-2.47	-9.163	.0794
6	7.9025	630.49	198.66	661.04	567.762	531.974	19.984	15.895	.5818	17.49	-2.41	-10.807	.0797
7	7.9413	622.25	195.35	652.20	567.866	533.033	19.968	15.983	.5734	17.43	-2.28	-12.781	.0800
8	7.9813	615.12	192.41	644.51	567.966	533.949	19.951	16.056	.5662	17.37	-2.09	-15.089	.0802
9	8.0224	609.65	190.51	638.72	568.099	534.690	19.942	16.114	.5607	17.35	-1.86	-17.680	.0804
10	8.0645	606.25	189.80	635.23	568.748	535.699	19.946	16.160	.5572	17.38	-1.59	-20.410	.0805
11	8.1075	603.73	189.57	632.85	569.395	536.599	19.950	16.193	.5546	17.43	-1.29	-23.085	.0805
12	8.1514	601.60	189.35	630.89	569.909	537.315	19.948	16.217	.5525	17.47	-.98	-25.496	.0805
13	8.1951	599.91	189.02	628.99	570.085	537.689	19.939	16.231	.5506	17.49	-.67	-27.379	.0805
14	8.2415	598.63	189.97	627.94	570.260	537.972	19.929	16.236	.5496	17.51	-.36	-28.589	.0805
15	8.2877	598.48	189.38	627.73	570.991	538.725	19.916	16.231	.5490	17.56	-.06	-29.362	.0804
16	8.3346	597.47	190.06	626.97	572.761	540.575	19.876	16.218	.5474	17.65	.22	-30.275	.0801
17	8.3623	597.10	191.74	627.13	574.627	542.427	19.834	16.193	.5466	17.80	.48	-32.318	.0797
18	8.4307	598.25	195.01	629.23	575.726	543.311	19.806	16.154	.5480	18.05	.70	-37.805	.0793
19	8.4797	600.77	199.76	633.11	576.795	543.981	19.792	16.099	.5511	18.39	.87	-55.355	.0790
20	8.5292	604.45	205.66	638.49	577.990	544.615	19.755	16.025	.5554	18.79	.94	-200.792	.0785
21	8.5795	609.18	212.49	645.13	579.386	545.311	19.723	15.935	.5609	19.23	.88	76.314	.0780

BLADE DATA

LOCAT -ION	BLADE-ANGLES SECTION	BLADE-ANGLES LEAN	REL FLOW ANGLE	DEVIATION INCIDENCE	LOSS COEFF	BLADE SPEED	RELATIVE MACH NO	RELATIVE VELOCITY	RELATIVE PRESSURE	RELATIVE TEMPERATURE	PRESSURE RATIO	DELTA T ON T	ISENTROPIC EFFICIENCY	POLYTROPIC EFFICIENCY
1	15.234	-9.414	17.585	1.351	.0331	0.0	.6326	714.43	20.021	567.379	1.362	.094	.9795	.9804
2	15.183	-8.919	17.536	1.353	.0337	0.0	.6215	702.94	20.018	567.474	1.362	.094	.9771	.9781
3	15.155	-8.355	17.518	1.363	.0345	0.0	.6110	691.84	20.015	567.560	1.362	.094	.9747	.9758
4	15.136	-7.714	17.519	1.383	.0357	0.0	.6008	681.20	20.009	567.635	1.362	.094	.9724	.9736
5	15.107	-6.981	17.520	1.412	.0373	0.0	.5912	671.06	20.002	567.700	1.361	.094	.9699	.9711
6	15.041	-6.141	17.489	1.448	.0417	0.0	.5818	661.04	19.984	567.762	1.360	.095	.9658	.9672
7	15.943	-5.210	17.429	1.486	.0465	0.0	.5734	652.20	19.968	567.868	1.359	.095	.9610	.9627
8	15.844	-4.228	17.370	1.525	.0517	0.0	.5662	644.51	19.951	567.966	1.358	.095	.9563	.9581
9	15.791	-3.245	17.354	1.563	.0553	0.0	.5607	638.72	19.942	568.099	1.357	.095	.9523	.9543
10	15.787	-2.311	17.383	1.597	.0582	0.0	.5572	635.28	19.946	568.748	1.357	.097	.9406	.9431
11	15.804	-1.475	17.430	1.627	.0613	0.0	.5546	632.85	19.950	569.395	1.358	.098	.9291	.9321
12	15.814	-.782	17.466	1.652	.0623	0.0	.5525	630.89	19.948	569.909	1.357	.099	.9196	.9230
13	15.818	-.190	17.488	1.671	.0565	0.0	.5505	628.99	19.939	570.085	1.357	.099	.9149	.9185
14	15.833	.422	17.514	1.681	.0508	0.0	.5495	627.94	19.929	570.260	1.356	.099	.9103	.9141
15	15.876	1.175	17.560	1.633	.0439	0.0	.5490	627.73	19.916	570.991	1.355	.101	.8955	.8999
16	15.967	2.035	17.645	1.679	.0393	0.0	.5474	626.97	19.876	572.761	1.352	.104	.8602	.8668
17	15.129	3.116	17.303	1.674	.0343	0.0	.5466	627.13	19.834	574.627	1.350	.108	.8254	.8326
18	15.362	4.248	18.054	1.673	.0324	0.0	.5480	629.23	19.806	575.726	1.348	.110	.8055	.8135
19	16.715	5.510	18.392	1.677	.0300	0.0	.5511	633.11	19.782	576.796	1.346	.112	.7873	.7960
20	17.100	6.945	18.790	1.690	.0272	0.0	.5554	638.49	19.755	577.990	1.344	.114	.7677	.7772
21	17.510	8.542	19.229	1.719	.0234	0.0	.5609	645.18	19.723	579.386	1.342	.117	.7457	.7560

STATION 13 INTEGRATED PERFORMANCE PRESSURE RATIO = 1.355 ISEN. EFF.= .895 POLY. EFF.= .899 DELTA T ON T = .101

STATION 14 FLOW FIELD DESCRIPTION

STREAM-LINE	RADIUS	VELOCITIES MERID	VELOCITIES TANGEN	VELOCITIES TOTAL	TEMPERATURES TOTAL	TEMPERATURES STATIC	PRESSURES TOTAL	PRESSURES STATIC	MACH NO	ANGLES WHIRL	ANGLES SLOPE	RADIUS OF CURVATURE	SPECIFIC WEIGHT
1	7.6720	550.27	59.61	553.49	567.379	542.293	19.956	17.022	.4825	6.18	-4.29	16.241	.0838
2	7.7103	548.97	58.23	552.05	567.474	542.519	19.945	17.028	.4811	6.05	-4.07	17.311	.0838
3	7.7493	547.58	56.97	550.54	567.560	542.742	19.934	17.033	.4797	5.94	-3.83	18.555	.0837
4	7.7892	546.10	55.90	548.96	567.635	542.959	19.922	17.039	.4783	5.84	-3.59	20.011	.0837
5	7.8299	544.44	54.99	547.21	567.700	543.182	19.907	17.044	.4766	5.77	-3.34	21.729	.0837
6	7.8714	541.55	54.07	544.24	567.762	543.503	19.878	17.049	.4739	5.70	-3.08	23.775	.0837
7	7.9139	538.73	53.24	541.35	567.868	543.872	19.849	17.052	.4712	5.64	-2.80	26.240	.0837
8	7.9574	535.85	52.49	538.43	567.966	544.229	19.818	17.055	.4685	5.59	-2.50	29.242	.0836
9	8.0018	534.23	51.90	536.73	568.099	544.509	19.801	17.057	.4670	5.55	-2.19	32.891	.0836
10	8.0471	534.24	51.66	536.74	568.748	545.160	19.798	17.058	.4667	5.53	-1.87	37.268	.0835
11	8.0931	534.42	51.52	536.90	569.395	545.794	19.794	17.056	.4665	5.51	-1.54	42.347	.0834
12	8.1399	534.82	51.46	537.29	569.909	546.273	19.792	17.053	.4667	5.50	-1.22	48.173	.0833
13	8.1873	536.17	51.55	538.64	570.085	546.330	19.799	17.047	.4678	5.49	-.90	55.644	.0833
14	8.2352	537.82	51.75	540.31	570.260	546.359	19.807	17.038	.4693	5.50	-.61	66.212	.0832
15	8.2837	539.77	52.05	542.28	570.991	546.915	19.813	17.027	.4707	5.51	-.35	81.827	.0831
16	8.3329	539.57	52.30	542.10	572.761	548.702	19.786	17.014	.4698	5.54	-.09	106.540	.0827
17	8.3828	539.42	52.79	541.99	574.527	550.580	19.758	17.000	.4689	5.59	.15	150.044	.0824
18	8.4335	539.58	53.66	542.24	575.726	551.559	19.737	16.984	.4687	5.68	.40	244.958	.0822
19	8.4849	540.15	55.10	542.95	576.795	552.565	19.721	16.968	.4689	5.82	.63	573.750	.0819
20	8.5371	540.60	57.21	543.62	577.990	553.800	19.703	16.952	.4690	6.04	.86	-5555.355	.0817
21	8.5930	540.39	59.97	544.21	579.386	555.145	19.683	16.935	.4689	6.33	1.06	-610.607	.0814

BLADE DATA

LOCAT-ION	BLADE-ANGLES SECTION	BLADE-ANGLES LEAN	REL FLOW ANGLE	DEVIATION INCIDENCE	LOSS COEFF	BLADE SPEED	RELATIVE MACH NO	RELATIVE VELOCITY	RELATIVE PRESSURE	RELATIVE TEMPERATURE	PRESSURE RATIO	DELTA T ON T	ISENTROPIC EFFICIENCY	POLYTROPIC EFFICIENCY
1	3.965	-1.054	6.193	2.219	.0494	0.0	.4825	553.49	19.956	567.379	1.358	.094	.9687	.9700
2	3.832	-.994	6.054	2.222	.0510	0.0	.4811	552.05	19.945	567.474	1.357	.094	.9650	.9665
3	3.699	-.920	5.939	2.241	.0527	0.0	.4797	550.54	19.934	567.560	1.356	.094	.9614	.9630
4	3.570	-.836	5.845	2.274	.0548	0.0	.4783	548.96	19.922	567.635	1.356	.094	.9579	.9597
5	3.447	-.746	5.767	2.320	.0577	0.0	.4765	547.21	19.907	567.700	1.355	.094	.9542	.9561
6	3.327	-.660	5.702	2.374	.0639	0.0	.4739	544.24	19.878	567.762	1.353	.095	.9482	.9504
7	3.210	-.582	5.644	2.434	.0710	0.0	.4712	541.35	19.849	567.868	1.351	.095	.9414	.9438
8	3.097	-.514	5.595	2.498	.0785	0.0	.4685	538.43	19.818	567.966	1.349	.095	.9345	.9372
9	2.994	-.457	5.555	2.561	.0838	0.0	.4670	536.75	19.801	568.099	1.347	.095	.9291	.9321
10	2.905	-.406	5.526	2.621	.0879	0.0	.4667	536.74	19.798	568.748	1.347	.097	.9166	.9200
11	2.833	-.351	5.507	2.673	.0923	0.0	.4665	536.90	19.794	569.395	1.347	.098	.9043	.9083
12	2.782	-.278	5.496	2.715	.0935	0.0	.4667	537.29	19.792	569.909	1.347	.099	.8949	.8992
13	2.752	-.194	5.493	2.741	.0848	0.0	.4678	538.64	19.799	570.085	1.347	.099	.8930	.8974
14	2.747	-.140	5.496	2.748	.0759	0.0	.4693	540.30	19.807	570.260	1.348	.099	.8912	.8956
15	2.770	-.160	5.508	2.738	.0655	0.0	.4707	542.28	19.813	570.991	1.348	.101	.8796	.8845
16	2.820	-.200	5.536	2.716	.0587	0.0	.4698	542.10	19.786	572.761	1.346	.104	.8468	.8531
17	2.892	-.427	5.589	2.698	.0512	0.0	.4689	541.99	19.758	574.527	1.344	.108	.8145	.8220
18	2.986	-.635	5.679	2.694	.0484	0.0	.4687	542.24	19.737	575.726	1.343	.110	.7958	.8041
19	3.115	-.836	5.825	2.710	.0449	0.0	.4689	542.95	19.721	576.796	1.342	.112	.7788	.7878
20	3.292	-.975	6.041	2.750	.0408	0.0	.4690	543.62	19.703	577.390	1.341	.114	.7607	.7703
21	3.508	-1.055	6.326	2.818	.0348	0.0	.4689	544.21	19.683	579.386	1.339	.117	.7484	.7589

STATION 14 INTEGRATED PERFORMANCE PRESSURE RATIO = 1.348 ISEN. EFF.= .879 POLY. EFF.= .884 DELTA T ON T = .101

STATION 15 FLOW FIELD DESCRIPTION

STREAM -LINE	RADIUS	VELOCITIES MERID	VELOCITIES TANGEN	VELOCITIES TOTAL	TEMPERATURES TOTAL	TEMPERATURES STATIC	PRESSURES TOTAL	PRESSURES STATIC	MACH NO	ANGLES WHIRL	ANGLES SLOPE	RADIUS OF CURVATURE	SPECIFIC WEIGHT
1	7.6400	488.19	0.00	488.19	567.379	547.865	19.891	17.588	.4234	0.00	-1.66	10.624	.0857
2	7.6804	488.26	0.00	488.26	567.474	547.955	19.873	17.571	.4234	0.00	-1.62	11.202	.0856
3	7.7216	488.21	0.00	488.21	567.560	548.045	19.853	17.555	.4234	0.00	-1.57	11.865	.0855
4	7.7636	488.04	0.00	488.04	567.635	548.133	19.834	17.539	.4232	0.00	-1.51	12.636	.0854
5	7.8064	487.55	0.00	487.55	567.700	548.237	19.812	17.527	.4227	0.00	-1.44	13.546	.0853
6	7.8502	485.08	0.00	485.08	567.762	548.495	19.771	17.510	.4205	0.00	-1.36	14.671	.0852
7	7.8949	482.38	0.00	482.38	567.868	548.815	19.728	17.497	.4180	0.00	-1.26	16.145	.0851
8	7.9408	479.42	0.00	479.42	567.966	549.149	19.685	17.485	.4153	0.00	-1.15	18.162	.0850
9	7.9875	478.05	0.00	478.05	568.099	549.369	19.659	17.475	.4141	0.00	-1.02	21.013	.0849
10	8.0351	478.39	0.00	478.39	568.748	550.011	19.650	17.465	.4141	0.00	-.88	25.165	.0847
11	8.0835	478.53	0.00	478.53	569.395	550.648	19.640	17.458	.4140	0.00	-.73	31.663	.0846
12	8.1325	479.11	0.00	479.11	569.909	551.115	19.637	17.452	.4143	0.00	-.58	43.038	.0845
13	8.1820	482.08	0.00	482.08	570.085	551.058	19.660	17.448	.4169	0.00	-.43	65.498	.0845
14	8.2319	484.87	0.00	484.87	570.260	551.0[illegible]	19.684	17.445	.4193	0.00	-.29	123.646	.0845
15	8.2822	487.69	0.00	487.69	570.991	551.[illegible]0	19.708	17.444	.4216	0.00	-.16	593.816	.0844
16	8.3331	487.04	0.00	487.04	572.761	553.343	19.694	17.444	.4203	0.00	-.04	-235.851	.0841
17	8.3845	486.24	0.00	486.24	574.627	555.774	19.680	17.446	.4189	0.00	.08	-102.473	.0838
18	8.4374	484.94	0.00	484.94	575.726	556.177	19.666	17.449	.4174	0.00	.20	-66.151	.0837
19	8.4908	484.14	0.00	484.14	576.796	557.511	19.658	17.453	.4162	0.00	.31	-49.305	.0835
20	8.5450	483.28	0.00	483.28	577.990	558.973	19.651	17.458	.4150	0.00	.42	-39.825	.0834
21	8.6000	482.35	0.00	482.35	579.386	560.345	19.644	17.465	.4137	0.00	.52	-33.905	.0832

BLADE DATA

LOCAT -ION	BLADE-ANGLES SECTION	BLADE-ANGLES LEAN	REL FLOW ANGLE	DEVIATION INCIDENCE	LOSS COEFF	BLADE SPEED	RELATIVE MACH NO	RELATIVE VELOCITY	RELATIVE PRESSURE	RELATIVE TEMPERATURE	PRESSURE RATIO	DELTA T ON T	ISENTROPIC EFFICIENCY	POLYTROPIC EFFICIENCY
1	-7.239	.020	0.000	7.239	.0657	0.0	.4234	488.19	19.891	567.379	1.354	.094	.9379	.9397
2	-7.398	.020	0.000	7.398	.0683	0.0	.4234	488.26	19.873	567.474	1.352	.094	.9530	.9549
3	-7.567	.019	0.000	7.567	.0709	0.0	.4234	488.21	19.853	567.560	1.351	.094	.9481	.9502
4	-7.739	.017	0.000	7.739	.0740	0.0	.4232	488.04	19.834	567.635	1.350	.094	.9434	.9457
5	-7.910	.015	0.000	7.910	.0773	0.0	.4227	487.55	19.812	567.700	1.348	.094	.9385	.9410
6	-8.080	.013	0.000	8.080	.0861	0.0	.4205	485.08	19.771	567.762	1.345	.095	.9305	.9334
7	-8.247	.011	0.000	8.247	.0957	0.0	.4180	482.38	19.728	567.868	1.342	.095	.9215	.9247
8	-8.403	.010	0.000	8.403	.1055	0.0	.4153	479.42	19.685	567.966	1.339	.095	.9125	.9161
9	-8.561	.008	0.000	8.561	.1123	0.0	.4141	478.05	19.659	568.099	1.338	.095	.9058	.9096
10	-8.699	.006	0.000	8.699	.1173	0.0	.4141	478.39	19.650	568.748	1.337	.097	.8925	.8968
11	-8.819	.005	0.000	8.819	.1231	0.0	.4140	478.53	19.640	569.395	1.336	.098	.8795	.8843
12	-8.920	.003	0.000	8.920	.1245	0.0	.4143	479.11	19.637	569.909	1.336	.099	.8702	.8754
13	-8.997	.001	0.000	8.997	.1130	0.0	.4169	482.08	19.660	570.085	1.338	.099	.8710	.8762
14	-9.047	-.002	0.000	9.047	.1011	0.0	.4193	484.87	19.684	570.260	1.339	.099	.8718	.8770
15	-9.063	-.004	0.000	9.063	.0875	0.0	.4216	487.69	19.708	570.991	1.341	.101	.8633	.8689
16	-9.059	-.008	0.000	9.059	.0735	0.0	.4203	487.04	19.694	572.761	1.340	.104	.8330	.8397
17	-9.060	-.012	0.000	9.060	.0683	0.0	.4189	486.24	19.680	574.627	1.339	.108	.8031	.8110
18	-9.086	-.018	0.000	9.086	.0651	0.0	.4174	484.94	19.666	575.726	1.338	.110	.7856	.7942
19	-9.126	-.024	0.000	9.126	.0604	0.0	.4162	484.14	19.658	576.796	1.338	.112	.7700	.7792
20	-9.170	-.031	0.000	9.170	.0545	0.0	.4150	483.28	19.651	577.990	1.337	.114	.7535	.7634
21	-9.213	-.038	0.000	9.213	.0463	0.0	.4137	482.36	19.644	579.386	1.337	.117	.7351	.7457

STATION 15 INTEGRATED PERFORMANCE PRESSURE RATIO = 1.341 ISEN. EFF.= .863 POLY. EFF.= .869 DELTA T ON T = .101

STATION 16 FLOW FIELD DESCRIPTION

STREAM -LINE	RADIUS	VELOCITIES MERID	VELOCITIES TANGEN	VELOCITIES TOTAL	TEMPERATURES TOTAL	TEMPERATURES STATIC	PRESSURES TOTAL	PRESSURES STATIC	MACH NO	ANGLES WHIRL	ANGLES SLOPE	RADIUS OF CURVATURE	SPECIFIC WEIGHT
1	7.6400	500.73	0.00	500.73	567.379	546.349	19.891	17.473	.4347	0.00	0.00	0.000	.0853
2	7.6796	498.93	0.00	498.93	567.474	547.088	19.873	17.473	.4331	0.00	-.03	1065.068	.0852
3	7.7202	497.21	0.00	497.21	567.560	547.319	19.853	17.473	.4315	0.00	-.06	575.874	.0852
4	7.7617	495.33	0.00	495.33	567.635	547.542	19.834	17.473	.4298	0.00	-.08	417.861	.0852
5	7.8041	493.33	0.00	493.33	567.700	547.774	19.812	17.472	.4279	0.00	-.10	343.575	.0851
6	7.8476	489.40	0.00	489.40	567.762	548.152	19.771	17.471	.4244	0.00	-.11	303.563	.0851
7	7.8921	485.34	0.00	485.34	567.868	548.582	19.728	17.471	.4207	0.00	-.12	281.811	.0850
8	7.9378	481.13	0.00	481.13	567.966	549.013	19.685	17.470	.4169	0.00	-.13	272.033	.0849
9	7.9846	478.65	0.00	478.65	568.099	549.341	19.659	17.469	.4146	0.00	-.13	271.638	.0849
10	8.0323	478.03	0.00	478.03	568.748	550.039	19.650	17.469	.4138	0.00	-.12	279.824	.0847
11	8.0808	477.39	0.00	477.39	569.395	550.737	19.640	17.468	.4130	0.00	-.12	296.971	.0846
12	8.1300	477.35	0.00	477.35	569.909	551.253	19.637	17.467	.4128	0.00	-.11	324.695	.0846
13	8.1798	479.93	0.00	479.93	570.085	551.228	19.660	17.467	.4150	0.00	-.10	365.829	.0846
14	8.2300	482.49	0.00	482.49	570.260	551.202	19.684	17.466	.4172	0.00	-.08	425.231	.0846
15	8.2806	485.23	0.00	485.23	570.991	551.715	19.708	17.466	.4194	0.00	-.07	511.989	.0845
16	8.3318	484.64	0.00	484.64	572.761	553.534	19.694	17.465	.4182	0.00	-.06	644.993	.0842
17	8.3839	484.05	0.00	484.05	574.627	555.448	19.680	17.465	.4170	0.00	-.04	865.732	.0839
18	8.4368	483.09	0.00	483.09	575.726	556.524	19.666	17.465	.4157	0.00	-.03	1275.371	.0837
19	8.4905	482.77	0.00	482.77	576.795	557.720	19.658	17.465	.4150	0.00	-.02	2194.678	.0836
20	8.5449	482.53	0.00	482.53	577.990	558.933	19.651	17.465	.4144	0.00	-.01	5310.909	.0834
21	8.6000	482.35	0.00	482.35	579.386	560.345	19.644	17.465	.4137	0.00	0.00	0.000	.0832

STATION 17 FLOW FIELD DESCRIPTION

STREAM -LINE	RADIUS	VELOCITIES MERID	VELOCITIES TANGEN	VELOCITIES TOTAL	TEMPERATURES TOTAL	TEMPERATURES STATIC	PRESSURES TOTAL	PRESSURES STATIC	MACH NO	ANGLES WHIRL	ANGLES SLOPE	RADIUS OF CURVATURE	SPECIFIC WEIGHT
1	7.6400	501.63	0.00	501.63	567.379	546.772	19.891	17.465	.4355	0.00	0.00	0.000	.0852
2	7.6796	499.93	0.00	499.93	567.474	547.011	19.873	17.465	.4339	0.00	-.00	0.000	.0852
3	7.7202	498.12	0.00	498.12	567.560	547.244	19.853	17.465	.4323	0.00	-.00	0.000	.0852
4	7.7616	496.27	0.00	496.27	567.635	547.471	19.834	17.465	.4306	0.00	-.00	0.000	.0851
5	7.8040	494.15	0.00	494.15	567.700	547.707	19.812	17.465	.4287	0.00	-.00	0.000	.0851
6	7.8474	490.17	0.00	490.17	567.762	548.090	19.771	17.465	.4250	0.00	-.01	0.000	.0850
7	7.8920	486.05	0.00	486.05	567.868	548.525	19.728	17.465	.4213	0.00	-.01	0.000	.0850
8	7.9376	481.75	0.00	481.75	567.966	548.964	19.685	17.465	.4174	0.00	-.01	0.000	.0849
9	7.9844	479.20	0.00	479.20	568.099	549.295	19.659	17.465	.4151	0.00	-.01	0.000	.0848
10	8.0321	478.50	0.00	478.50	568.748	550.002	19.650	17.465	.4142	0.00	-.01	0.000	.0847
11	8.0805	477.78	0.00	477.78	569.395	550.707	19.640	17.465	.4133	0.00	-.01	0.000	.0846
12	8.1298	477.67	0.00	477.67	569.909	551.223	19.637	17.465	.4130	0.00	-.01	0.000	.0845
13	8.1796	480.17	0.00	480.17	570.085	551.209	19.660	17.465	.4152	0.00	-.01	0.000	.0845
14	8.2298	482.67	0.00	482.67	570.260	551.187	19.684	17.465	.4174	0.00	-.01	0.000	.0845
15	8.2804	485.35	0.00	485.35	570.991	551.705	19.708	17.464	.4195	0.00	-.01	0.000	.0845
16	8.3317	484.73	0.00	484.73	572.761	553.527	19.694	17.464	.4183	0.00	-.01	0.000	.0842
17	8.3838	484.10	0.00	484.10	574.627	555.444	19.680	17.464	.4170	0.00	-.00	0.000	.0839
18	8.4367	483.12	0.00	483.12	575.725	556.622	19.666	17.464	.4157	0.00	-.00	0.000	.0837
19	8.4904	482.79	0.00	482.79	576.795	557.713	19.658	17.464	.4150	0.00	-.00	0.000	.0836
20	8.5448	482.53	0.00	482.53	577.990	558.933	19.651	17.464	.4144	0.00	-.00	0.000	.0834
21	8.6000	482.36	0.00	482.36	579.386	560.345	19.644	17.465	.4137	0.00	0.00	0.000	.0832

ROTOR PERFORMANCE

LOCAT -ION	INLET RADIUS	OUTLET RADIUS	INLET M. NO	INCID -ENCE	DEVIA -TION	LOSS COEFF	2-D D FACTOR	3-D D FACTOR	DELTA P ON Q	REL V RATIO	DELTA H/U**2	SECTION-ANGLES INLET	SECTION-ANGLES OUTLET	LEAN-ANGLES INLET	LEAN-ANGLES OUTLET
1	6.7500	7.5499	.5690	8.014	15.101	-.0021	.3379	.3468	.5746	.7948	.6591	-62.667	-11.816	17.205	2.399
2	6.8663	7.5946	.5786	8.154	14.710	-.0008	.3531	.3611	.5694	.7815	.6526	-62.597	-12.945	16.454	2.643
3	6.9813	7.6402	.5881	8.226	14.238	.0003	.3662	.3733	.5628	.7700	.6460	-62.601	-14.085	15.443	2.932
4	7.0951	7.6868	.5974	8.240	13.865	.0011	.3776	.3838	.5554	.7601	.6392	-62.669	-15.212	14.165	3.249
5	7.2078	7.7341	.6066	8.264	13.466	.0016	.3873	.3928	.5473	.7515	.6322	-62.735	-16.303	12.789	3.573
6	7.3196	7.7822	.6157	8.326	13.113	.0020	.3958	.4005	.5389	.7440	.6252	-62.773	-17.331	11.468	3.881
7	7.4305	7.8310	.6246	8.381	12.734	.0025	.4034	.4074	.5303	.7373	.6188	-62.829	-18.271	10.324	4.152
8	7.5406	7.8804	.6335	8.402	12.537	.0028	.4099	.4133	.5213	.7315	.6123	-62.933	-19.118	9.405	4.376
9	7.6502	7.9306	.6422	8.417	12.340	.0038	.4161	.4188	.5121	.7260	.6062	-63.059	-19.882	8.581	4.557
10	7.7595	7.9815	.6508	8.455	11.966	.0161	.4298	.4319	.5027	.7144	.6064	-63.180	-20.576	7.725	4.780
11	7.8686	8.0333	.6593	8.515	11.548	.0277	.4424	.4439	.4930	.7038	.6063	-63.298	-21.212	6.892	4.811
12	7.9777	8.0861	.6677	8.590	11.527	.0398	.4536	.4546	.4830	.6940	.6045	-63.421	-21.804	6.193	4.893
13	8.0870	8.1401	.6760	8.685	11.835	.0498	.4530	.4635	.4726	.6843	.5985	-63.545	-22.356	5.657	4.945
14	8.1968	8.1953	.6842	8.813	12.193	.0603	.4715	.4715	.4618	.6765	.5925	-63.659	-22.867	5.256	4.961
15	8.3072	8.2521	.6924	8.932	12.504	.0841	.4896	.4891	.4507	.6600	.5927	-63.756	-23.334	4.934	4.930
16	8.4186	8.3116	.7005	9.191	12.856	.1313	.5269	.5260	.4395	.6270	.6040	-63.843	-23.759	4.593	4.842
17	8.5311	8.3753	.7087	9.430	13.510	.1783	.5660	.5646	.4286	.5922	.6154	-63.928	-24.142	4.156	4.682
18	8.6451	8.4430	.7168	9.682	14.240	.2029	.5867	.5849	.4181	.5734	.6175	-64.032	-24.471	3.623	4.457
19	8.7610	8.5141	.7249	9.936	15.186	.2255	.6061	.6039	.4079	.5555	.6186	-64.170	-24.727	3.020	4.186
20	8.8791	8.5893	.7330	10.215	16.532	.2499	.6281	.6255	.3984	.5353	.6203	-64.329	-24.897	2.482	3.897
21	9.0000	8.6699	.7411	10.560	18.477	.2779	.6554	.6524	.3903	.5103	.6232	-64.476	-24.964	1.836	3.617

STATOR PERFORMANCE

LOCAT -ION	INLET RADIUS	OUTLET RADIUS	INLET M. NO	INCID -ENCE	DEVIA -TION	LOSS COEFF	2-D D FACTOR	3-D D FACTOR	DELTA P ON Q	REL V RATIO	DELTA H/U**2	SECTION-ANGLES INLET	SECTION-ANGLES OUTLET	LEAN-ANGLES INLET	LEAN-ANGLES OUTLET
1	7.6199	7.6400	.5709	-6.327	7.239	.0657	.3886	.3884	.3571	.7520	0.0000	48.817	-7.239	-39.941	.020
2	7.6778	7.6804	.5895	-7.342	7.398	.0683	.4130	.4130	.3862	.7299	0.0000	48.017	-7.398	-36.706	.020
3	7.7315	7.7216	.6061	-8.116	7.567	.0709	.4340	.4341	.4097	.7110	0.0000	47.295	-7.567	-33.321	.019
4	7.7813	7.7636	.6193	-8.737	7.739	.0740	.4505	.4507	.4263	.6965	0.0000	46.773	-7.739	-29.899	.017
5	7.8283	7.8064	.6292	-9.181	7.910	.0779	.4535	.4637	.4372	.6857	0.0000	46.357	-7.910	-26.482	.015
6	7.8736	7.8502	.6365	-9.486	8.080	.0861	.4764	.4766	.4441	.6749	0.0000	46.005	-8.080	-23.117	.013
7	7.9177	7.8949	.6421	-9.648	8.247	.0957	.4876	.4878	.4476	.6657	0.0030	45.680	-8.247	-19.855	.011
8	7.9611	7.9408	.6450	-9.720	8.409	.1055	.4974	.4976	.4489	.6578	0.0000	45.371	-8.409	-16.630	.010
9	8.0041	7.9875	.6486	-9.706	8.561	.1123	.5035	.5036	.4485	.6534	0.0000	45.092	-8.561	-13.253	.008
10	8.0470	8.0351	.6505	-9.293	8.699	.1175	.5081	.5082	.4460	.6517	0.0000	44.858	-8.699	-9.548	.006
11	8.0901	8.0835	.6514	-8.895	8.819	.1231	.5117	.5117	.4423	.6507	0.0000	44.692	-8.819	-5.619	.005
12	8.1334	8.1325	.6504	-8.586	8.920	.1245	.5122	.5122	.4392	.6522	0.0000	44.623	-8.920	-1.881	.003
13	8.1773	8.1820	.6455	-8.445	8.997	.1130	.5050	.5049	.4389	.6604	0.0000	44.669	-8.997	1.624	.001
14	8.2219	8.2319	.6402	-8.327	9.047	.1011	.4966	.4965	.4377	.6695	0.0000	44.798	-9.047	5.023	-.002
15	8.2675	8.2822	.6330	-7.701	9.063	.0876	.4881	.4880	.4361	.6800	0.0000	44.959	-9.063	9.197	-.004
16	8.3150	8.3331	.6234	-6.061	9.059	.0786	.4855	.4853	.4340	.6877	0.0000	45.130	-9.059	14.921	-.008
17	8.3653	8.3848	.6113	-4.232	9.060	.0589	.4801	.4799	.4291	.6981	0.0000	45.455	-9.060	21.940	-.012
18	8.4190	8.4374	.5979	-3.233	9.086	.0651	.4699	.4697	.4164	.7101	0.0000	46.148	-9.086	29.369	-.018
19	8.4773	8.4908	.5805	-2.258	9.126	.0504	.4529	.4527	.3960	.7281	0.0000	47.296	-9.126	36.344	-.024
20	8.5428	8.5450	.5575	-.799	9.170	.0545	.4280	.4280	.3644	.7541	0.0000	48.826	-9.170	42.294	-.031
21	8.6199	8.6000	.5291	1.526	9.213	.0403	.3935	.3938	.3187	.7903	0.0000	50.814	-9.213	46.652	-.038

WAKE AND BOUNDARY LAYER BLOCKAGES (PERCENT)

STATION	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17
MID BLOCKAGE	0.0	0.0	0.0	0.0	11.5	6.3	6.0	7.3	2.4	5.5	9.0	9.1	9.2	9.3	9.3	10.4	10.5
DIST FACTOR	1.0	1.0	1.0	1.0	.5	.5	.3	0.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
INT BLOCKAGE	0.0	0.0	0.0	0.0	11.8	7.0	6.1	7.5	2.4	5.5	9.0	9.1	9.2	9.3	9.3	10.4	10.5

SUMMARY POINT NO. 1 THE CALCULATION IS CONVERGED PASS 21

TEST POINT TITLE = 239220-15050

FLOW = 12.48 SPEED = 10192.1 PRESSURE RATIO = 1.341 ISENTROPIC EFFY = .8630 POLYTROPIC EFFY = .8686 DEL T/T = .1089

3. PHASE II WITHIN - BLADE ANALYSIS (60% SPEED) TEST POINT 208221315260

STATION 1 FLOW FIELD DESCRIPTION

STREAM -LINE	RADIUS	VELOCITIES MERID	VELOCITIES TANGEN	VELOCITIES TOTAL	TEMPERATURES TOTAL	TEMPERATURES STATIC	PRESSURES TOTAL	PRESSURES STATIC	MACH NO	ANGLES WHIRL	ANGLES SLOPE	RADIUS OF CURVATURE	SPECIFIC WEIGHT
1	6.0685	204.01	0.00	204.01	518.688	515.279	14.696	14.359	.1824	0.00	20.93	0.000	.0743
2	6.2258	204.01	0.00	204.01	518.688	515.279	14.696	14.359	.1824	0.00	19.76	0.000	.0743
3	6.3636	204.01	0.00	204.01	518.688	515.279	14.696	14.359	.1824	0.00	18.57	0.000	.0743
4	6.5392	204.01	0.00	204.01	518.688	515.279	14.696	14.359	.1824	0.00	17.38	0.000	.0743
5	6.6937	204.01	0.00	204.01	518.688	515.279	14.696	14.359	.1824	0.00	16.18	0.000	.0743
6	6.8472	204.01	0.00	204.01	518.688	515.279	14.696	14.359	.1824	0.00	14.98	0.000	.0743
7	6.9998	204.01	0.00	204.01	518.688	515.279	14.696	14.359	.1824	0.00	13.77	0.000	.0743
8	7.1517	204.01	0.00	204.01	518.688	515.279	14.696	14.359	.1824	0.00	12.58	0.000	.0743
9	7.3026	204.01	0.00	204.01	518.688	515.279	14.696	14.359	.1824	0.00	11.38	0.000	.0743
10	7.4534	204.01	0.00	204.01	518.688	515.279	14.696	14.359	.1824	0.00	10.20	0.000	.0743
11	7.6034	204.01	0.00	204.01	518.688	515.279	14.696	14.359	.1824	0.00	9.03	0.000	.0743
12	7.7529	204.01	0.00	204.01	518.688	515.279	14.696	14.359	.1824	0.00	7.88	0.000	.0743
13	7.9021	204.01	0.00	204.01	518.688	515.279	14.696	14.359	.1824	0.00	6.76	0.000	.0743
14	8.0510	204.01	0.00	204.01	518.688	515.279	14.696	14.359	.1824	0.00	5.68	0.000	.0743
15	8.1997	204.01	0.00	204.01	518.688	515.279	14.696	14.359	.1824	0.00	4.64	0.000	.0743
16	8.3482	204.01	0.00	204.01	518.688	515.279	14.696	14.359	.1824	0.00	3.65	0.000	.0743
17	8.4966	204.01	0.00	204.01	518.688	515.279	14.696	14.359	.1824	0.00	2.74	0.000	.0743
18	8.6450	204.01	0.00	204.01	518.688	515.279	14.696	14.359	.1824	0.00	1.90	0.000	.0743
19	8.7933	204.01	0.00	204.01	518.688	515.279	14.696	14.359	.1824	0.00	1.15	0.000	.0743
20	8.9416	204.01	0.00	204.01	518.688	515.279	14.696	14.359	.1824	0.00	.51	0.000	.0743
21	9.0900	204.01	0.00	204.01	518.688	515.279	14.696	14.359	.1824	0.00	0.00	0.000	.0743

STATION 2 FLOW FIELD DESCRIPTION

STREAM -LINE	RADIUS	VELOCITIES MERID	VELOCITIES TANGEN	VELOCITIES TOTAL	TEMPERATURES TOTAL	TEMPERATURES STATIC	PRESSURES TOTAL	PRESSURES STATIC	MACH NO	ANGLES WHIRL	ANGLES SLOPE	RADIUS OF CURVATURE	SPECIFIC WEIGHT
1	6.3740	220.43	0.00	220.43	518.688	514.706	14.696	14.303	.1972	0.00	20.83	-205.758	.0742
2	6.5141	221.50	0.00	221.50	518.688	514.669	14.696	14.300	.1981	0.00	19.60	-136.435	.0741
3	6.6523	222.41	0.00	222.41	518.688	514.635	14.696	14.297	.1989	0.00	18.38	-110.078	.0741
4	6.7895	223.24	0.00	223.24	518.688	514.606	14.696	14.294	.1997	0.00	17.16	-95.390	.0741
5	6.9258	224.00	0.00	224.00	518.688	514.578	14.696	14.291	.2004	0.00	15.93	-84.934	.0741
6	7.0612	224.68	0.00	224.68	518.688	514.553	14.696	14.288	.2010	0.00	14.70	-76.192	.0741
7	7.1960	225.25	0.00	225.25	518.688	514.532	14.696	14.286	.2015	0.00	13.47	-68.258	.0740
8	7.3301	225.73	0.00	225.73	518.688	514.514	14.696	14.285	.2019	0.00	12.24	-60.662	.0740
9	7.4639	226.08	0.00	226.08	518.688	514.501	14.696	14.283	.2023	0.00	11.00	-53.978	.0740
10	7.5973	226.29	0.00	226.29	518.688	514.494	14.696	14.283	.2024	0.00	9.77	-47.647	.0740
11	7.7305	226.33	0.00	226.33	518.688	514.492	14.696	14.283	.2025	0.00	8.54	-41.896	.0740
12	7.8536	226.19	0.00	226.19	518.688	514.497	14.696	14.283	.2024	0.00	7.33	-36.730	.0740
13	7.9970	225.85	0.00	225.85	518.688	514.510	14.696	14.284	.2020	0.00	6.13	-32.127	.0740
14	8.1305	225.28	0.00	225.23	518.688	514.531	14.696	14.286	.2015	0.00	4.96	-28.050	.0740
15	8.2646	224.47	0.00	224.47	518.688	514.561	14.696	14.289	.2008	0.00	3.82	-24.456	.0741
16	8.3983	223.40	0.00	223.40	518.688	514.600	14.696	14.293	.1998	0.00	2.71	-21.301	.0741
17	8.5343	222.04	0.00	222.04	518.688	514.650	14.696	14.298	.1986	0.00	1.66	-18.539	.0741
18	8.6715	220.38	0.00	220.33	518.688	514.710	14.696	14.304	.1971	0.00	.65	-16.123	.0741
19	8.8094	218.38	0.00	218.38	518.688	514.782	14.696	14.311	.1953	0.00	-.28	-14.009	.0741
20	8.9438	216.01	0.00	216.01	518.688	514.865	14.696	14.319	.1932	0.00	-1.14	-12.154	.0742
21	9.0900	213.24	0.00	213.24	518.688	514.964	14.696	14.329	.1907	0.00	-1.91	-10.518	.0742

STATION 3 FLOW FIELD DESCRIPTION

STREAM -LINE	RADIUS	------VELOCITIES------- MERID	TANGEN	TOTAL	--TEMPERATURES-- TOTAL	STATIC	---PRESSURES--- TOTAL	STATIC	MACH NO	---ANGLES--- WHIRL	SLOPE	RADIUS OF CURVATURE	SPECIFIC WEIGHT
1	6.6016	239.23	0.00	239.23	518.688	514.000	14.696	14.235	.2141	0.00	20.54	-83.831	.0739
2	6.7259	240.42	0.00	240.42	518.688	513.953	14.696	14.230	.2152	0.00	19.37	-197.661	.0738
3	6.8494	241.73	0.00	241.73	518.688	513.900	14.696	14.225	.2164	0.00	18.17	-1027.054	.0738
4	6.9722	243.23	0.00	243.23	518.688	513.842	14.696	14.219	.2177	0.00	16.95	1152.952	.0738
5	7.0943	244.68	0.00	244.68	518.688	513.784	14.696	14.214	.2190	0.00	15.78	1032.811	.0738
6	7.2156	246.07	0.00	246.07	518.688	513.728	14.696	14.208	.2203	0.00	14.43	-3025.278	.0738
7	7.3364	247.35	0.00	247.35	518.688	513.677	14.696	14.203	.2215	0.00	13.13	-358.653	.0737
8	7.4566	248.45	0.00	248.45	518.688	513.631	14.696	14.199	.2225	0.00	11.81	-161.078	.0737
9	7.5754	249.37	0.00	249.37	518.688	513.594	14.696	14.195	.2233	0.00	10.47	-95.839	.0737
10	7.6960	250.03	0.00	250.03	518.688	513.567	14.696	14.193	.2239	0.00	9.12	-65.128	.0737
11	7.8154	250.41	0.00	250.41	518.688	513.552	14.696	14.191	.2242	0.00	7.76	-47.848	.0737
12	7.9350	250.43	0.00	250.43	518.688	513.549	14.696	14.191	.2243	0.00	6.39	-36.930	.0737
13	8.0548	250.21	0.00	250.21	518.688	513.560	14.696	14.192	.2240	0.00	5.02	-29.476	.0737
14	8.1753	249.57	0.00	249.57	518.688	513.585	14.696	14.194	.2235	0.00	3.65	-24.089	.0737
15	8.2960	248.53	0.00	248.53	518.688	513.629	14.696	14.199	.2225	0.00	2.28	-20.041	.0737
16	8.4178	247.05	0.00	247.05	518.688	513.689	14.696	14.204	.2212	0.00	.92	-16.914	.0737
17	8.5409	245.13	0.00	245.13	518.688	513.765	14.696	14.212	.2194	0.00	-.42	-14.451	.0738
18	8.6653	242.72	0.00	242.72	518.688	513.862	14.696	14.221	.2173	0.00	-1.74	-12.480	.0738
19	8.7914	239.92	0.00	239.92	518.688	513.977	14.696	14.232	.2147	0.00	-3.03	-10.898	.0738
20	8.9136	236.42	0.00	236.42	518.688	514.110	14.696	14.245	.2116	0.00	-4.28	-9.643	.0739
21	9.0500	232.55	0.00	232.55	518.688	514.259	14.696	14.260	.2081	0.00	-5.47	-8.690	.0739

STATION 4 FLOW FIELD DESCRIPTION

STREAM -LINE	RADIUS	------VELOCITIES------- MERID	TANGEN	TOTAL	--TEMPERATURES-- TOTAL	STATIC	---PRESSURES--- TOTAL	STATIC	MACH NO	---ANGLES--- WHIRL	SLOPE	RADIUS OF CURVATURE	SPECIFIC WEIGHT
1	6.7580	254.42	0.00	254.42	518.688	513.386	14.696	14.175	.2278	0.00	20.32	-388.854	.0736
2	6.8659	257.45	0.00	257.45	518.688	513.259	14.696	14.163	.2306	0.00	19.23	-195.022	.0736
3	6.9806	260.41	0.00	260.41	518.688	513.133	14.696	14.150	.2333	0.00	18.06	-126.887	.0735
4	7.0942	263.27	0.00	263.27	518.688	513.011	14.696	14.139	.2359	0.00	16.84	-94.628	.0735
5	7.2058	265.95	0.00	265.95	518.688	512.894	14.696	14.127	.2383	0.00	15.56	-75.967	.0735
6	7.3135	268.47	0.00	268.47	518.688	512.784	14.696	14.117	.2406	0.00	14.23	-62.816	.0734
7	7.4294	270.74	0.00	270.74	518.688	512.684	14.696	14.107	.2426	0.00	12.87	-52.841	.0734
8	7.5396	272.74	0.00	272.74	518.688	512.595	14.696	14.098	.2444	0.00	11.46	-44.522	.0733
9	7.6492	274.42	0.00	274.42	518.688	512.520	14.696	14.091	.2460	0.00	10.02	-38.308	.0733
10	7.7586	275.73	0.00	275.73	518.688	512.461	14.696	14.085	.2472	0.00	8.56	-33.856	.0733
11	7.8678	276.65	0.00	276.65	518.688	512.415	14.696	14.081	.2480	0.00	7.08	-30.780	.0733
12	7.9770	277.20	0.00	277.20	518.688	512.394	14.696	14.079	.2485	0.00	5.59	-28.400	.0733
13	8.0865	277.32	0.00	277.32	518.688	512.389	14.696	14.078	.2486	0.00	4.09	-26.366	.0733
14	8.1954	276.99	0.00	276.99	518.688	512.404	14.696	14.080	.2483	0.00	2.58	-24.365	.0733
15	8.3059	276.15	0.00	276.15	518.688	512.441	14.696	14.083	.2476	0.00	1.05	-22.275	.0733
16	8.4154	274.80	0.00	274.80	518.688	512.503	14.696	14.089	.2463	0.00	-.49	-20.411	.0733
17	8.5310	272.55	0.00	272.55	518.688	512.590	14.696	14.098	.2446	0.00	-2.02	-18.837	.0733
18	8.6451	270.30	0.00	270.30	518.688	512.703	14.696	14.109	.2422	0.00	-3.56	-17.111	.0734
19	8.7611	267.02	0.00	267.02	518.688	512.849	14.696	14.123	.2393	0.00	-5.11	-15.814	.0734
20	8.8732	262.89	0.00	262.89	518.688	513.027	14.696	14.140	.2355	0.00	-6.68	-12.690	.0735
21	9.0080	257.71	0.00	257.71	518.688	513.248	14.696	14.162	.2308	0.00	-8.25	-10.317	.0736

BLADE DATA

LOCAT -ION	BLADE-ANGLES SECTION	LEAN	REL FLOW ANGLE	DEVIATION INCIDENCE	LOSS COEFF	BLADE SPEED	RELATIVE MACH NO	RELATIVE VELOCITY	RELATIVE PRESSURE	RELATIVE TEMPERATURE	PRESSURE RATIO	DELTA T ON T	ISENTROPIC EFFICIENCY	POLYTROPIC EFFICIENCY
1	-62.007	17.205	-70.527	-7.809	0.0000	719.5	.6835	763.18	19.369	561.365	1.000	0.000	1.0000	1.0000
2	-62.598	16.457	-70.520	-3.022	0.0000	731.9	.6949	775.83	19.548	562.531	1.000	0.000	1.0000	1.0000
3	-62.601	15.450	-70.[illegible]	-6.110	0.0000	744.1	.7062	788.35	19.729	564.007	1.000	0.000	1.0000	1.0000
4	-62.670	14.176	-70.565	-3.135	0.0000	756.2	.7174	800.73	19.913	565.494	1.000	0.000	1.0000	1.0000
5	-62.736	12.881	-70.904	-3.107	0.0000	768.2	.7284	812.95	20.099	566.990	1.000	0.000	1.0000	1.0000
6	-62.774	11.430	-71.010	-3.235	0.0000	780.1	.7393	825.02	20.287	568.497	1.000	0.000	1.0000	1.0000
7	-62.938	10.334	-71.126	-8.296	0.0000	791.9	.7501	836.94	20.479	570.017	1.000	0.000	1.0000	1.0000
8	-62.933	9.413	-71.255	-3.321	0.0000	803.7	.7507	848.70	20.673	571.549	1.000	0.000	1.0000	1.0000
9	-63.059	8.599	-71.399	-8.340	0.0000	815.4	.7711	860.31	20.871	573.097	1.000	0.000	1.0000	1.0000
10	-63.180	7.732	-71.552	-3.382	0.0000	827.0	.7914	871.78	21.072	574.562	1.000	0.000	1.0000	1.0000
11	-63.299	6.899	-71.743	-3.446	0.0000	838.7	.7915	883.12	21.278	575.247	1.000	0.000	1.0000	1.0000
12	-63.421	6.197	-71.944	-3.524	0.0000	850.3	.8017	894.35	21.487	577.855	1.000	0.000	1.0000	1.0000
13	-63.545	5.660	-72.150	-3.621	0.0000	862.0	.8117	905.49	21.702	579.488	1.000	0.000	1.0000	1.0000
14	-63.658	5.258	-72.410	-3.751	0.0000	873.7	.8215	916.55	21.922	581.150	1.000	0.000	1.0000	1.0000
15	-63.756	4.935	-72.676	-3.922	0.0000	885.5	.8314	927.55	22.146	582.844	1.000	0.000	1.0000	1.0000
16	-63.942	4.534	-72.974	-3.132	0.0000	897.4	.8412	938.49	22.380	584.576	1.000	0.000	1.0000	1.0000
17	-63.928	4.156	-73.298	-9.370	0.0000	909.4	.8509	949.42	22.620	586.348	1.000	0.000	1.0000	1.0000
18	-64.031	3.623	-73.653	-9.621	0.0000	921.5	.8606	960.36	22.869	588.168	1.000	0.000	1.0000	1.0000
19	-64.178	3.020	-74.043	-9.873	0.0000	933.9	.8703	971.31	23.126	590.042	1.000	0.000	1.0000	1.0000
20	-64.329	2.401	-74.477	-10.149	0.0000	946.5	.8800	982.31	23.394	591.976	1.000	0.000	1.0000	1.0000
21	-64.470	1.836	-74.954	-10.407	0.0000	959.4	.8895	993.37	23.675	593.982	1.000	0.000	1.0000	1.0000

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STATION 5 FLOW FIELD DESCRIPTION

STREAM -LINE	RADIUS	VELOCITIES MERID	VELOCITIES TANGEN	VELOCITIES TOTAL	TEMPERATURES TOTAL	TEMPERATURES STATIC	PRESSURES TOTAL	PRESSURES STATIC	MACH NO	ANGLES WHIRL	ANGLES SLOPE	RADIUS OF CURVATURE	SPECIFIC WEIGHT
1	6.8979	304.93	168.09	348.46	539.001	529.058	16.823	15.757	.3075	28.95	22.32	6.199	.0794
2	7.0049	310.78	167.26	352.93	539.140	528.943	16.837	15.744	.3114	28.29	21.07	6.519	.0794
3	7.1103	316.35	165.66	357.10	539.249	528.869	16.847	15.728	.3151	27.64	19.70	7.079	.0793
4	7.2143	321.63	163.91	360.99	539.331	528.562	16.855	15.712	.3186	27.00	18.24	7.955	.0793
5	7.3170	326.65	162.22	364.69	539.408	528.507	16.863	15.695	.3221	26.40	16.70	9.271	.0792
6	7.4185	332.11	160.73	368.96	539.502	528.357	16.872	15.678	.3257	25.82	15.11	11.214	.0791
7	7.5191	337.17	159.40	372.97	539.618	528.229	16.883	15.664	.3293	25.31	13.48	14.154	.0791
8	7.6187	341.61	158.31	376.69	539.743	528.126	16.896	15.652	.3326	24.85	11.81	19.040	.0790
9	7.7177	346.03	157.34	380.12	539.885	528.055	16.91[illegible]	15.643	.3357	24.45	10.12	28.741	.0790
10	7.8153	349.45	157.50	383.39	540.178	528.149	16.9[illegible]8	15.639	.3385	24.26	8.42	56.808	.0790
11	7.9140	352.60	157.90	386.34	540.504	528.284	16.949	15.640	.3411	24.12	6.72	793.747	.0789
12	8.0133	355.47	158.61	389.25	540.874	528.469	16.974	15.644	.3436	24.05	5.03	-72.565	.0789
13	8.1120	358.01	159.33	392.00	541.320	528.736	17.003	15.653	.3460	24.06	3.35	-37.182	.0790
14	8.2111	360.34	161.30	394.80	541.807	529.047	17.036	15.667	.3483	24.11	1.68	-26.628	.0790
15	8.3106	362.11	164.65	397.38	542.428	529.501	17.073	15.685	.3505	24.32	.02	-22.272	.0790
16	8.4111	362.67	167.98	399.69	543.351	530.274	17.112	15.707	.3522	24.85	-1.60	-20.666	.0790
17	8.5127	362.70	172.39	401.58	544.303	531.102	17.152	15.734	.3536	25.42	-3.17	-21.034	.0790
18	8.6156	362.79	175.06	402.82	545.015	531.732	17.191	15.763	.3545	25.76	-4.71	-23.657	.0791
19	8.7199	362.27	177.23	403.30	545.662	532.348	17.226	15.793	.3547	26.07	-6.25	-38.504	.0791
20	8.8259	350.98	179.28	403.05	546.307	533.010	17.257	15.825	.3543	26.41	-7.80	-52.456	.0792
21	8.9340	358.94	181.38	402.16	546.971	533.733	17.283	15.856	.3533	26.81	-9.38	-1665.883	.0792

BLADE DATA

LOCAT -ION	BLADE-ANGLES SECTION	LEAN	REL FLOW ANGLE	DEVIATION INCIDENCE	LOSS COEFF	BLADE SPEED	RELATIVE MACH NO	RELATIVE VELOCITY	RELATIVE PRESSURE	RELATIVE TEMPERATURE	PRESSURE RATIO	DELTA T ON T	ISENTROPIC EFFICIENCY	POLYTROPIC EFFICIENCY
1	-50.252	10.432	-51.712	-1.450	-.0005	735.3	.5677	643.44	19.601	562.341	1.145	.039	1.0010	1.0010
2	-50.364	9.970	-51.793	-1.429	-.0002	746.7	.5802	657.51	19.769	564.323	1.146	.039	1.0004	1.0004
3	-50.534	9.654	-51.932	-1.359	.0031	757.9	.5925	671.46	19.939	565.706	1.146	.040	.9998	.9998
4	-50.699	7.845	-52.035	-1.303	.0043	769.0	.6048	685.27	20.109	567.090	1.147	.040	.9993	.9993
5	-50.854	6.622	-52.115	-1.252	.0005	780.0	.6169	698.88	20.282	568.477	1.147	.040	.9989	.9989
6	-50.935	5.532	-52.235	-1.221	.0135	790.8	.6289	712.23	20.456	569.866	1.148	.040	.9986	.9986
7	-51.108	4.757	-52.294	-1.155	.0039	801.5	.6403	725.19	20.631	571.263	1.149	.040	.9979	.9980
8	-51.242	4.130	-52.430	-1.127	.0011	812.1	.6515	737.77	20.809	572.664	1.150	.041	.9974	.9974
9	-51.365	3.755	-52.522	-1.137	.0013	822.7	.6623	749.93	20.988	574.074	1.151	.041	.9969	.9959
10	-51.528	3.350	-52.553	-1.125	.0043	833.2	.6717	760.70	21.153	575.497	1.152	.041	.9906	.9908
11	-51.669	2.939	-52.790	-1.122	.0055	843.7	.6809	771.12	21.321	576.936	1.153	.042	.9845	.9846
12	-51.804	2.454	-52.831	-1.127	.0091	854.2	.6895	781.15	21.491	578.394	1.155	.043	.9783	.9788
13	-51.934	2.041	-53.174	-1.140	.0123	864.7	.6977	790.55	21.659	579.872	1.157	.044	.9707	.9713
14	-52.057	1.628	-53.220	-1.153	.0154	875.3	.7055	799.75	21.831	581.374	1.159	.045	.9633	.9641
15	-52.174	1.630	-53.372	-1.198	.0202	885.9	.7125	807.92	21.993	582.902	1.162	.046	.9521	.9531
16	-52.287	1.635	-53.555	-1.251	.0297	896.5	.7172	813.87	22.119	584.461	1.154	.048	.9307	.9322
17	-52.404	1.753	-53.736	-1.331	.0332	907.4	.7219	819.64	22.247	586.058	1.167	.049	.9101	.9121
18	-52.533	1.629	-53.785	-1.445	.0445	918.4	.7279	827.12	22.414	587.594	1.170	.051	.8988	.9010
19	-52.691	1.336	-54.250	-1.595	.0490	929.5	.7344	834.96	22.593	589.374	1.172	.052	.8890	.8915
20	-52.365	1.743	-54.533	-1.773	.0543	940.5	.7409	842.74	22.773	591.101	1.174	.053	.8783	.8810
21	-53.050	1.554	-55.534	-1.979	.0598	952.3	.7470	850.41	22.952	592.883	1.176	.055	.8657	.8688

STATION 5 INTEGRATED PERFORMANCE PRESSURE RATIO = 1.159 ISEN. EFF.= .954 POLY. EFF.= .955 DELTA T ON T = .045

STATION 6 FLOW FIELD DESCRIPTION
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STREAM -LINE	RADIUS	VELOCITIES MERID	VELOCITIES TANGEN	VELOCITIES TOTAL	TEMPERATURES TOTAL	TEMPERATURES STATIC	PRESSURES TOTAL	PRESSURES STATIC	MACH NO	ANGLES WHIRL	ANGLES SLOPE	RADIUS OF CURVATURE	SPECIFIC WEIGHT
1	7.0734	347.31	223.55	415.54	546.929	532.795	17.711	16.154	.3653	33.37	27.37	4.302	.0809
2	7.1741	355.52	224.33	420.45	546.778	532.307	17.691	16.099	.3698	32.24	25.21	5.666	.0807
3	7.2671	363.22	220.54	425.33	546.700	531.909	17.630	16.054	.3740	31.30	23.02	7.813	.0805
4	7.3579	369.64	217.79	429.33	546.657	531.591	17.673	16.019	.3776	30.51	20.81	11.598	.0804
5	7.4459	375.12	215.15	432.44	546.654	531.345	17.670	15.991	.3807	29.84	18.59	19.906	.0803
6	7.5345	380.01	213.07	435.67	546.709	531.172	17.675	15.971	.3836	29.28	16.39	51.737	.0802
7	7.6211	384.47	211.71	438.91	546.850	531.081	17.688	15.959	.3865	29.84	14.23	-148.034	.0801
8	7.7058	388.51	210.84	442.03	547.049	531.055	17.708	15.953	.3893	28.49	12.10	-35.691	.0801
9	7.7920	392.00	210.30	444.45	547.269	531.091	17.733	15.955	.3917	28.21	10.00	-22.349	.0801
10	7.8770	393.97	211.74	447.20	547.799	531.429	17.759	15.962	.3937	28.26	7.96	-17.379	.0801
11	7.9620	395.44	213.40	449.35	548.344	531.817	17.790	15.975	.3954	28.35	5.96	-14.940	.0801
12	8.0474	396.05	215.37	451.35	548.938	532.264	17.825	15.993	.3970	28.50	4.03	-13.647	.0801
13	8.1333	397.30	218.00	453.13	549.535	532.824	17.862	16.014	.3984	28.75	2.16	-13.018	.0801
14	8.2198	397.75	220.71	454.91	550.352	533.414	17.901	16.038	.3997	29.02	.36	-12.856	.0802
15	8.3072	397.24	224.85	456.47	551.269	534.235	17.940	16.064	.4008	29.51	-1.37	-13.115	.0802
16	8.3950	394.20	232.80	457.51	552.801	535.647	17.979	16.092	.4014	30.56	-2.98	-13.949	.0801
17	8.4837	390.59	240.79	458.85	554.352	537.121	18.016	16.122	.4018	31.65	-4.45	-15.768	.0800
18	8.5792	386.20	245.17	459.14	555.396	538.144	18.049	16.153	.4017	32.27	-5.80	-19.346	.0800
19	8.6734	384.45	248.55	458.65	556.314	539.099	18.075	16.183	.4009	32.82	-7.06	-25.904	.0801
20	8.7635	381.91	251.96	457.55	557.251	540.120	18.093	16.212	.3996	33.42	-8.25	-50.345	.0800
21	8.8579	377.4	255.73	455.92	558.264	541.255	18.104	16.238	.3977	34.12	-9.38	1665.883	.0800

BLADE DATA

LOCAT -ION	BLADE-ANGLES SECTION	BLADE-ANGLES LEAN	REL FLOW ANGLE	DEVIATION INCIDENCE	LOSS COEFF	BLADE SPEED	RELATIVE MACH NO	RELATIVE VELOCITY	RELATIVE PRESSURE	RELATIVE TEMPERATURE	PRESSURE RATIO	DELTA T ON T	ISENTROPIC EFFICIENCY	POLYTROPIC EFFICIENCY
1	-54.590	3.732	-56.583	-1.993	-.0010	754.5	.5540	630.11	19.892	565.285	1.205	.054	1.0015	1.0014
2	-54.727	3.254	-56.653	-1.926	-.0004	764.7	.5590	646.91	20.046	566.553	1.204	.054	1.0006	1.0006
3	-54.884	2.485	-56.740	-1.857	.0002	774.5	.5828	662.28	20.199	567.5[illegible]	1.203	.054	.9997	.9997
4	-55.088	1.536	-56.877	-1.783	.0005	784.3	.5954	676.45	20.351	569.0	1.203	.054	.9998	.9998
5	-55.320	.602	-57.045	-1.726	.0010	793.8	.6071	689.60	20.504	570.258	1.202	.054	.9984	.9984
6	-55.548	-.125	-57.218	-1.670	.0013	803.1	.6180	701.85	20.656	571.478	1.203	.054	.9978	.9979
7	-55.755	-.570	-57.378	-1.623	.0019	812.4	.6280	713.[illegible]	20.808	572.698	1.204	.054	.9969	.9978
8	-55.951	-.791	-57.535	-1.585	.0023	821.5	.6374	723.75	20.962	573.919	1.205	.055	.9961	.9962
9	-55.151	-.851	-57.709	-1.558	.0027	830.5	.6462	733.78	21.117	575.145	1.207	.055	.9953	.9955
10	-56.355	-.821	-57.899	-1.541	.0080	839.6	.6525	741.23	21.239	576.381	1.208	.056	.9860	.9863
11	-56.559	-.777	-58.100	-1.535	.0139	848.7	.6585	748.33	21.365	577.533	1.211	.057	.9770	.9776
12	-56.767	-.732	-58.309	-1.542	.0182	857.9	.6642	755.03	21.490	578.802	1.213	.058	.9678	.9687
13	-56.965	-.642	-58.525	-1.559	.0246	867.0	.6690	7[illegible].93	21.608	580.193	1.215	.060	.9565	.9576
14	-57.159	-.814	-58.749	-1.590	.0307	876.2	.6737	760.74	21.728	581.507	1.218	.061	.9455	.9470
15	-57.344	-.595	-58.982	-1.636	.0404	885.5	.6769	770.89	21.823	582.349	1.221	.063	.9289	.9309
16	-57.524	-.174	-59.234	-1.711	.0594	895.0	.6757	770.63	21.840	584.226	1.223	.066	.8975	.9004
17	-57.709	.340	-59.529	-1.820	.0764	904.5	.6745	770.23	21.857	585.548	1.226	.069	.8674	.8712
18	-57.910	.967	-59.837	-1.976	.0890	914.5	.6769	773.76	21.945	587.113	1.228	.071	.8585	.8548
19	-58.129	1.559	-60.307	-2.177	.0981	924.5	.6802	778.14	22.048	588.523	1.230	.073	.8358	.8405
20	-58.352	2.044	-60.781	-2.418	.1030	934.8	.6832	782.36	22.145	590.180	1.231	.074	.8197	.8249
21	-58.608	2.350	-61.[illegible]35	-2.697	.1195	945.3	.6857	786.09	22.230	591.790	1.232	.076	.8011	.8069

STATION 5 INTEGRATED PERFORMANCE PRESSURE RATIO = 1.215 ISEN. EFF.= .931 POLY. EFF.= .933 DELTA T ON T = .061

STATION 7 FLOW FIELD DESCRIPTION

STREAM -LINE	RADIUS	VELOCITIES MERID	VELOCITIES TANGEN	VELOCITIES TOTAL	TEMPERATURES TOTAL	TEMPERATURES STATIC	PRESSURES TOTAL	PRESSURES STATIC	MACH NO	ANGLES WHIRL	ANGLES SLOPE	RADIUS OF CURVATURE	SPECIFIC WEIGHT
1	7.3120	432.53	337.41	548.57	561.741	537.115	19.459	16.621	.4804	37.96	26.61	-3.372	.0825
2	7.3815	434.54	336.72	549.73	562.060	537.331	19.494	16.640	.4813	37.77	23.83	-3.407	.0826
3	7.4502	436.42	335.83	551.23	562.479	537.609	19.540	16.667	.4825	37.66	21.17	-3.505	.0827
4	7.5143	437.90	337.16	552.64	562.924	537.930	19.591	16.699	.4836	37.60	18.63	-3.671	.0828
5	7.5851	438.83	337.37	553.53	563.349	538.277	19.640	16.734	.4842	37.55	16.19	-3.907	.0829
6	7.6540	439.35	337.40	553.96	563.751	538.641	19.686	16.771	.4844	37.52	13.86	-4.214	.0830
7	7.7219	439.55	337.49	554.19	564.164	539.033	19.732	16.810	.4844	37.52	11.62	-4.592	.0832
8	7.7902	439.50	337.64	554.45	564.566	539.431	19.779	16.850	.4845	37.51	9.48	-5.042	.0833
9	7.8538	440.11	337.30	554.86	565.025	539.835	19.830	16.891	.4847	37.52	7.42	-5.574	.0834
~~10~~	7.9231	438.24	340.83	555.17	565.838	540.620	19.876	16.932	.4846	37.87	5.44	-6.208	.0835
11	7.9984	436.43	343.75	555.55	566.664	541.412	19.927	16.975	.4846	38.23	3.55	-6.966	.0836
12	8.0637	434.44	340.77	555.87	567.516	542.236	19.977	17.018	.4845	38.60	1.73	-7.865	.0837
13	8.1422	431.59	350.51	556.07	568.484	543.185	20.025	17.062	.4842	39.07	-.01	-8.913	.0838
14	8.2151	428.93	354.17	556.25	569.461	544.147	20.073	17.106	.4840	39.55	-1.67	-10.107	.0838
15	8.2915	424.35	360.06	556.52	570.777	545.440	20.121	17.150	.4836	40.31	-3.25	-11.446	.0839
~~16~~	~~8.3694~~	414.74	372.25	557.30	573.045	547.640	20.172	17.197	.4833	41.91	-4.69	-12.974	.0837
17	8.4504	404.45	385.09	558.47	575.461	549.950	20.229	17.246	.4833	43.59	-5.95	-14.952	.0836
~~18~~	~~8.5344~~	394.00	392.49	558.97	577.126	551.571	20.286	17.297	.4831	44.60	-7.03	-18.080	.0836
19	8.6208	391.80	398.83	559.03	578.569	553.106	20.339	17.350	.4825	45.51	-7.97	-24.230	.0837
20	8.7098	384.70	405.72	559.11	580.334	554.778	20.391	17.402	.4818	46.52	-8.76	-42.547	.0837
21	8.8019	376.32	413.79	559.32	582.223	556.641	20.442	17.452	.4812	47.72	-9.37	*956875.344	.0836

BLADE DATA

LOCAT -ION	BLADE-ANGLES SECTION	LEAN	REL FLOW ANGLE	DEVIATION INCIDENCE	LOSS COEFF	BLADE SPEED	RELATIVE MACH NO	RELATIVE VELOCITY	RELATIVE PRESSURE	RELATIVE TEMPERATURE	PRESSURE RATIO	DELTA T ON T	ISENTROPIC EFFICIENCY	POLYTROPIC EFFICIENCY
1	-42.577	-5.902	-45.521	-3.044	-.0015	779.4	.5416	618.43	20.284	568.409	1.324	.083	1.0015	1.0014
2	-43.085	-5.845	-46.006	-2.923	-.0005	786.8	.5478	625.64	20.399	569.357	1.326	.084	1.0006	1.0005
3	-43.537	-5.694	-46.340	-2.803	.0003	794.2	.5533	632.14	20.514	570.304	1.330	.084	.9997	.9997
4	-43.985	-5.457	-46.672	-2.687	.0010	801.4	.5584	638.18	20.630	571.251	1.333	.085	.9990	.9991
5	-44.462	-5.203	-47.042	-2.580	.0015	808.6	.5633	643.95	20.748	572.204	1.336	.086	.9984	.9985
6	-44.955	-4.837	-47.440	-2.465	.0020	815.9	.5680	649.60	20.868	573.164	1.340	.087	.9979	.9980
7	-45.445	-4.302	-47.849	-2.405	.0027	823.1	.5726	655.03	20.987	574.135	1.343	.088	.9971	.9972
8	-45.910	-3.834	-48.250	-2.340	.0034	830.4	.5771	660.47	21.109	[illegible]	1.346	.088	.9963	.9964
9	-46.341	-3.219	-48.635	-2.293	.0040	837.7	.5817	665.96	21.234	575.116	1.349	.089	.9956	.9958
10	-46.744	-2.600	-49.008	-2.204	.0120	845.1	.5831	668.09	21.310	577.132	1.353	.091	.9867	.9872
11	-47.127	-2.043	-49.380	-2.254	.0195	852.6	.5847	670.36	21.389	578.172	1.356	.092	.9780	.9790
12	-47.502	-1.608	-49.763	-2.261	.0272	860.2	.5862	672.56	21.467	579.236	1.359	.094	.9691	[illegible]
13	-47.874	-1.257	-50.150	-2.287	.0363	867.9	.5865	673.85	21.532	580.328	1.363	.096	.9580	.9598
14	-48.237	-.907	-50.569	-2.333	.0401	875.8	.5875	675.33	21.600	581.450	1.366	.098	.9472	.9495
15	-48.582	-.459	-50.987	-2.405	.0505	883.8	.5858	674.11	21.628	582.507	1.369	.100	.9307	.9337
16	-48.905	.100	-51.419	-2.514	.0892	892.1	.5768	665.05	21.538	583.512	1.373	.105	.8993	.9837
17	-49.215	.767	-51.892	-2.670	.1177	900.8	.5572	655.40	21.445	585.078	1.377	.109	.8691	.8748
18	-49.516	1.475	-52.423	-2.906	.1335	909.7	.5540	652.63	21.457	586.401	1.380	.113	.8528	.8586
19	-49.809	2.150	-53.010	-3.201	.1472	918.9	.5520	651.17	21.489	587.778	1.384	.116	.8372	.8445
20	-50.093	2.728	-53.643	-3.555	.1621	928.4	.5593	649.02	21.511	589.211	1.388	.119	.8212	.8293
21	-50.376	3.053	-54.339	-3.963	.1795	938.2	.5553	645.49	21.511	590.708	1.391	.122	.8032	.8121

STATION 7 INTEGRATED PERFORMANCE PRESSURE RATIO = 1.358 ISEN. EFF.= .932 POLY. EFF.= .935 DELTA T ON T = .098

STATION 8 FLOW FIELD DESCRIPTION

STREAM -LINE	RADIUS	VELOCITIES MERID	TANGEN	TOTAL	TEMPERATURES TOTAL	STATIC	PRESSURES TOTAL	STATIC	MACH NO	ANGLES WHIRL	SLOPE	RADIUS OF CURVATURE	SPECIFIC WEIGHT
1	7.4792	527.55	484.65	716.37	581.921	539.343	22.036	16.933	.6257	42.57	16.56	-1.483	.0836
2	7.5275	519.57	484.40	710.35	582.295	541.021	22.079	17.047	.6198	42.99	14.88	-2.23[illegible]	.0840
3	7.5759	513.13	483.95	705.35	582.658	541.362	22.121	17.146	.6149	43.33	13.28	-2.684	.0844
4	7.6275	508.05	483.33	701.27	583.004	542.780	22.161	17.233	.6109	43.57	11.77	-3.292	.0847
5	7.6792	504.21	482.52	697.89	583.324	543.488	22.199	17.308	.6076	43.74	10.31	-4.148	.0849
6	7.7319	501.33	481.35	695.05	583.610	544.095	22.234	17.373	.6047	43.83	8.89	-5.397	.0852
7	7.7857	499.22	479.36	692.52	583.872	544.548	22.261	17.429	.6022	43.87	7.51	-7.437	.0853
8	7.8404	497.73	478.14	690.22	584.082	545.117	22.282	17.477	.6000	43.85	6.14	-11.281	.0855
9	7.8952	497.02	475.92	688.13	584.241	545.513	22.298	17.516	.5980	43.76	4.79	-21.809	.0856
10	7.9532	492.87	476.37	685.45	584.779	546.349	22.291	17.549	.5952	44.02	3.44	-82.230	.0857
11	8.0116	489.33	476.09	683.14	585.305	547.139	22.284	17.577	.5927	44.25	2.09	59.701	.0857
12	8.0716	486.05	477.24	681.13	585.881	547.935	22.277	17.600	.5906	44.48	.73	25.321	.0857
13	8.1331	481.94	473.87	679.49	586.624	548.877	22.260	17.622	.5886	44.82	-.64	17.462	.0856
14	8.1965	478.07	480.54	677.85	587.391	549.817	22.262	17.641	.5867	45.15	-1.99	14.059	.0856
15	8.2616	470.95	484.39	675.95	588.564	551.200	22.246	17.660	.5844	45.83	-3.32	12.412	.0854
16	8.3304	454.34	497.07	673.43	590.911	553.670	22.213	17.682	.5808	47.57	-4.62	11.985	[illegible]
17	8.4033	430.13	510.49	671.41	593.505	556.550	22.193	17.710	.5776	49.49	-5.81	12.743	.0848
18	8.4805	424.95	517.46	669.59	595.222	558.569	22.194	17.745	.5751	50.61	-6.98	15.805	.0847
19	8.5614	414.53	523.95	668.12	596.918	560.429	22.211	17.788	.5728	51.65	-7.89	20.686	.0846
20	8.6463	402.59	532.47	667.54	598.976	562.553	22.249	17.840	.5713	52.91	-8.74	40.551	.0846
21	8.7359	387.77	543.89	667.97	601.544	565.077	22.311	17.902	.5704	54.51	-9.37	*816564.766	.0845

BLADE DATA

LOCAT-ION	BLADE-ANGLES SECTION	BLADE-ANGLES LEAN	REL FLOW ANGLE	DEVIATION INCIDENCE	LOSS COEFF	BLADE SPEED	RELATIVE MACH NO	RELATIVE VELOCITY	RELATIVE PRESSURE	RELATIVE TEMPERATURE	PRESSURE RATIO	DELTA T ON T	ISENTROPIC EFFICIENCY	POLYTROPIC EFFICIENCY
1	-25.429	-6.276	-30.549	-5.220	-.0021	797.2	.5356	613.21	20.577	570.707	1.499	.122	1.0014	1.0013
2	-26.465	-5.891	-31.406	-5.003	-.0008	802.4	.5315	609.16	20.656	571.380	1.502	.123	1.0005	1.0005
3	-27.452	-5.378	-32.244	-4.792	.0003	807.7	.5289	606.69	20.738	572.074	1.505	.123	.9998	.9998
4	-28.307	-4.728	-32.930	-4.593	.0013	813.1	.5276	605.66	20.824	572.788	1.508	.124	.9991	.9991
5	-29.271	-3.999	-33.533	-4.412	.0020	818.6	.5275	605.94	20.914	573.523	1.511	.125	.9985	.9986
6	-30.109	-3.222	-34.363	-4.254	.0025	824.2	.5285	607.40	21.007	574.278	1.513	.125	.9981	.9982
7	-30.909	-2.438	-35.031	-4.122	.0035	829.9	.5302	609.66	21.100	575.053	1.515	.126	.9972	.9974
8	-31.677	-1.637	-35.694	-4.017	.0045	835.6	.5323	612.93	21.196	575.848	1.516	.126	.9964	.9966
9	-32.410	-.987	-36.351	-3.941	.0053	841.7	.5362	617.11	21.296	576.663	1.517	.126	.9957	.9960
10	-33.104	-.345	-37.000	-3.895	.0159	847.8	.5359	617.14	21.330	577.502	1.517	.127	.9869	.9877
11	-33.755	.224	-37.635	-3.980	.0260	854.0	.5361	617.91	21.368	578.369	1.516	.126	.9783	.9795
12	-34.353	.706	-38.249	-3.896	.0353	860.4	.5366	618.91	21.404	579.264	1.516	.130	.9691	.9709
13	-34.981	1.108	-38.843	-3.942	.0491	867.0	.5360	618.77	21.421	580.191	1.515	.131	.9576	.9608
14	-35.411	1.450	-39.434	-4.023	.0615	873.7	.5355	618.98	21.440	581.151	1.515	.132	.9461	.9492
15	-35.894	1.761	-40.043	-4.149	.0908	880.7	.5318	615.19	21.404	582.151	1.514	.135	.9285	.9326
16	-35.369	2.074	-40.708	-4.339	.1191	888.0	.5169	599.36	21.209	583.207	1.511	.139	.8949	.9008
17	-35.838	2.399	-41.458	-4.620	.1571	895.8	.5005	581.93	21.010	584.341	1.510	.144	.8619	.8697
18	-37.271	2.715	-42.259	-5.018	.1763	904.0	.4933	574.45	20.950	585.550	1.510	.148	.8426	.8515
19	-37.626	2.996	-43.155	-5.527	.1965	912.5	.4872	568.26	20.915	586.330	1.511	.151	.8259	.8357
20	-37.895	3.216	-44.030	-6.135	.2163	921.7	.4792	559.95	20.869	588.187	1.514	.155	.8033	.8191
21	-38.132	3.347	-44.965	-6.834	.2393	931.2	.4580	548.07	20.793	589.533	1.518	.160	.7888	.8008

STATION 8 INTEGRATED PERFORMANCE PRESSURE RATIO = 1.513 ISEN. EFF.= .931 POLY. EFF.= .935 DELTA T ON T = .134

STATION 9 FLOW FIELD DESCRIPTION

STREAM-LINE	RADIUS	VELOCITIES MERID	VELOCITIES TANGEN	VELOCITIES TOTAL	TEMPERATURES TOTAL	TEMPERATURES STATIC	PRESSURES TOTAL	PRESSURES STATIC	MACH NO	ANGLES WHIRL	ANGLES SLOPE	RADIUS OF CURVATURE	SPECIFIC WEIGHT
1	7.5439	529.94	546.76	761.44	590.688	543.273	23.230	17.305	.6630	45.89	8.54	-5.625	.0849
2	7.5940	525.95	544.03	756.70	590.746	543.919	23.229	17.371	.6585	45.97	8.18	-7.200	.0852
3	7.6390	522.77	541.22	752.47	590.799	544.496	23.228	17.429	.6545	45.99	7.75	-8.904	.0854
4	7.6849	520.25	538.34	748.64	590.846	545.012	23.227	17.482	.6508	45.98	7.27	-11.034	.0855
5	7.7316	518.28	535.33	745.15	590.885	545.479	23.226	17.530	.6475	45.93	6.72	-13.824	.0857
6	7.7791	516.79	532.36	741.93	590.919	545.904	23.226	17.574	.6445	45.85	6.13	-17.827	.0858
7	7.8273	515.42	529.51	738.94	590.978	546.325	23.224	17.614	.6416	45.77	5.50	-24.471	.0860
8	7.8762	514.45	526.61	736.13	591.031	546.711	23.222	17.651	.6390	45.67	4.83	-38.527	.0861
9	7.9259	513.85	523.65	733.67	591.078	547.062	23.221	17.685	.6366	45.54	4.12	-93.119	.0862
10	7.9762	[illegible]	523.45	735.14	592.204	548.012	23.275	17.715	.6374	45.96	3.37	171.739	.0862
11	8.0275	508.61	533.18	736.67	593.339	548.941	23.329	17.743	.6383	46.35	2.56	40.630	.0862
12	8.0798	505.39	535.88	737.33	594.344	549.892	23.358	17.767	.6382	46.73	1.71	21.868	.0862
13	8.1333	497.54	536.65	731.31	594.813	551.025	23.281	17.787	.6327	47.17	.81	14.706	.0861
14	8.1883	489.92	536.37	726.45	595.287	552.140	23.202	17.804	.6275	47.59	-.13	11.071	.0860
15	8.2451	478.37	540.04	721.44	596.344	553.792	23.120	17.816	.6222	48.47	-1.11	8.877	.0858
16	8.3048	454.83	554.70	717.01	599.026	557.000	23.032	17.828	.6166	50.68	-2.15	7.497	.0854
17	8.3690	426.79	569.95	712.04	601.867	560.427	22.937	17.843	.6105	53.17	-3.28	6.746	.0849
18	8.4376	409.84	577.46	708.12	603.651	562.669	22.878	17.861	.6059	54.64	-4.49	6.471	.0847
19	8.5100	393.61	583.65	703.97	605.296	564.795	22.823	17.884	.6013	56.00	-5.80	6.595	.0844
20	8.5868	373.22	598.00	698.81	607.145	567.233	22.761	17.915	.5956	57.72	-7.24	7.718	.0842
21	8.6639	344.49	593.67	691.56	609.338	570.253	22.688	17.964	.5879	60.12	-8.95	20.749	.0840

BLADE DATA

LOCAT -ION	BLADE-ANGLES SECTION	BLADE-ANGLES LEAN	REL FLOW ANGLE	DEVIATION INCIDENCE	LOSS COEFF	BLADE SPEED	RELATIVE MACH NO	RELATIVE VELOCITY	RELATIVE PRESSURE	RELATIVE TEMPERATURE	PRESSURE RATIO	DELTA T ON T	ISENTROPIC EFFICIENCY	POLYTROPIC EFFICIENCY
1	-11.816	2.399	-25.951	-14.145	-.0025	904.8	.5132	589.42	20.705	571.594	1.581	.139	1.0015	1.0014
2	-12.929	2.639	-26.731	-13.632	-.0003	809.5	.5127	589.15	20.775	572.315	1.581	.139	1.0006	1.0005
3	-14.053	2.924	-27.59[illegible]	-13.527	.0004	814.3	.5130	589.79	20.850	572.952	1.581	.139	.9997	.9997
4	-15.165	3.236	-2[illegible]	-13.195	.0015	819.2	.5140	591.21	20.927	573.505	1.581	.139	.9990	.9991
5	-15.243	3.556	[illegible].120	-12.683	.0025	824.2	.5155	593.31	21.008	574.274	1.580	.139	.9984	.9985
6	-17.262	3.803	-29.675	-12.513	.0032	829.2	.5177	595.97	21.091	574.958	1.580	.139	.9978	.9979
7	-18.197	4.133	-30.502	-12.405	.0045	834.4	.5200	598.82	21.172	575.557	1.580	.139	.9968	.9970
8	-19.042	4.355	-31.314	-12.272	.0057	839.6	.5227	602.17	21.257	576.371	1.580	.139	.9959	.9962
9	-19.806	4.542	-32.009	-12.203	.0065	844.9	.5258	605.99	21.344	577.099	1.580	.140	.9951	.9954
10	-20.499	4.637	-32.197	-11.699	.0199	850.2	.5235	603.92	21.347	577.343	1.584	.142	.9852	.9861
11	-21.135	4.630	-32.379	-11.244	.0324	855.7	.5217	602.25	21.352	578.506	1.587	.144	.9755	.9770
12	-21.725	4.635	-32.495	-10.970	.0453	861.3	.5198	600.54	21.353	579.388	1.589	.146	.9652	.9674
13	-22.278	4.941	-33.480	-11.301	.0614	867.0	.5164	597.21	21.327	580.193	1.584	.147	.9520	.9550
14	-22.734	4.961	-34.430	-11.665	.0768	872.8	.5134	594.33	21.303	581.027	1.579	.148	.9386	.9424
15	-23.269	4.937	-35.312	-12.044	.1010	878.9	.5056	585.22	21.207	581.894	1.573	.150	.9182	.9232
16	-23.702	4.855	-36.139	-12.337	.1458	885.3	.4832	561.85	20.910	582.812	1.567	.155	.8795	.8568
17	-24.097	4.701	-37.946	-12.949	.19[illegible]	892.1	.4585	534.72	20.603	583.905	1.561	.160	.8411	.8507
18	-24.459	4.476	-38.151	-13.712	.2223	899.4	.4460	521.17	20.468	584.876	1.557	.164	.8184	.8293
19	-24.709	4.203	-39.414	-14.795	.2457	907.1	.4351	509.47	20.363	586.015	1.553	.167	.7982	.8102
20	-24.890	3.906	-41.037	-15.117	.2794	915.3	.4215	494.57	20.238	587.235	1.549	.171	.7753	.7896
21	-24.904	3.617	-43.235	-16.324	.2991	924.2	.4023	473.26	20.078	588.567	1.544	.175	.7535	.7662

STATION 9 INTEGRATED PERFORMANCE PRESSURE RATIO = 1.573 ISEN. EFF.= .921 POLY. EFF.= .926 DELTA T ON T = .149

STATION 10 FLOW FIELD DESCRIPTION

STREAM -LINE	RADIUS	VELOCITIES MERID	VELOCITIES TANGEN	VELOCITIES TOTAL	TEMPERATURES TOTAL	TEMPERATURES STATIC	PRESSURES TOTAL	PRESSURES STATIC	MACH NO	ANGLES WHIRL	ANGLES SLOPE	RADIUS OF CURVATURE	SPECIFIC WEIGHT
1	7.5740	529.40	544.90	759.73	590.688	543.479	23.239	17.328	.6614	45.83	7.82	9.349	.0850
2	7.6221	533.02	542.03	760.23	590.746	543.485	23.229	17.322	.6618	45.48	7.72	10.488	.0850
3	7.6693	537.60	539.06	761.45	590.799	543.383	23.228	17.304	.6630	45.07	7.44	12.712	.0849
4	7.7174	543.04	536.87	763.06	590.846	543.229	23.227	17.281	.6645	44.63	7.05	15.462	.0848
5	7.7649	548.27	533.33	764.71	590.885	543.062	23.226	17.258	.6660	44.20	6.60	18.355	.0847
6	7.8121	553.13	530.11	766.14	590.919	542.915	23.226	17.238	.6673	43.78	6.11	21.105	.0847
7	7.8590	557.22	527.36	767.22	590.978	542.840	23.224	17.222	.6683	43.42	5.59	23.382	.0846
8	7.9059	560.50	524.63	767.94	591.031	542.802	23.222	17.211	.6690	43.09	5.07	24.688	.0846
9	7.9528	563.94	521.88	768.37	591.078	542.795	23.221	17.204	.6693	42.78	4.54	24.803	.0845
10	8.0000	564.45	520.39	772.17	592.204	543.445	23.275	17.201	.6722	43.03	4.00	23.872	.0844
11	8.0470	564.71	531.86	775.74	593.339	544.129	23.329	17.202	.6749	43.28	3.46	22.239	.0843
12	8.0957	563.49	535.32	777.53	594.344	544.902	23.358	17.206	.6761	43.56	2.91	20.351	.0842
13	8.1447	557.25	535.30	773.13	594.813	545.935	23.281	17.216	.6716	43.88	2.33	18.468	.0841
14	8.1948	550.13	535.95	768.03	595.287	547.049	23.212	17.233	.6665	44.25	1.72	16.727	.0840
15	8.2404	538.45	533.95	762.54	596.344	549.801	23.120	17.258	.6606	45.08	1.05	15.153	.0839
16	8.3005	514.42	554.99	756.73	599.026	552.210	23.032	17.295	.6536	47.17	.29	13.628	.0835
17	8.3534	485.35	573.57	749.43	601.867	555.951	22.937	17.346	.6452	49.59	-.63	12.017	.0832
18	8.4207	464.92	578.02	742.27	603.651	558.618	22.878	17.413	.6374	51.22	-1.74	10.274	.0831
19	8.4875	443.33	585.20	734.23	605.29[illegible]	561.239	22.823	17.491	.6291	52.85	-3.02	8.303	.0831
20	8.5539	418.15	592.55	725.32	607.145	564.151	22.761	17.574	.6199	54.79	-4.48	5.864	.0831
21	8.6399	389.53	601.75	716.92	609.338	567.350	22.688	17.643	.6109	57.08	-6.18	3.053	.0829

STATION 11 FLOW FIELD DESCRIPTION

STREAM -LINE	RADIUS	VELOCITIES MERID	VELOCITIES TANGEN	VELOCITIES TOTAL	TEMPERATURES TOTAL	TEMPERATURES STATIC	PRESSURES TOTAL	PRESSURES STATIC	MACH NO	ANGLES WHIRL	ANGLES SLOPE	RADIUS OF CURVATURE	SPECIFIC WEIGHT
1	7.6199	545.25	541.74	758.63	590.688	542.372	23.230	17.204	.6698	44.81	9.06	26.367	.0846
2	7.6753	573.93	533.20	786.80	590.746	540.117	23.229	16.947	.6871	43.16	8.55	1071.629	.0837
3	7.7291	593.39	534.91	803.37	590.799	538.014	23.228	16.710	.7029	41.75	7.91	-44.327	.0828
4	7.7735	619.70	531.55	816.64	590.846	535.300	23.227	16.519	.7157	40.64	7.25	-26.671	.0821
5	7.8252	635.13	529.97	826.55	590.885	535.005	23.226	16.375	.7252	39.79	6.60	-21.520	.0816
6	7.8703	640.73	526.19	833.74	590.919	534.063	23.226	16.270	.7322	39.13	5.99	-19.855	.0812
7	7.9143	645.13	523.59	838.75	590.978	533.435	23.224	16.196	.7370	38.64	5.44	-20.123	.0810
8	7.9577	651.31	521.22	842.02	591.031	533.039	23.222	16.147	.7401	38.24	4.96	-22.081	.0808
9	8.0006	655.55	519.75	843.84	591.078	532.835	23.221	16.120	.7419	37.93	4.53	-26.261	.0807
10	8.0435	656.53	524.04	847.86	592.204	533.406	23.275	16.110	.7450	38.18	4.15	-34.217	.0805
11	8.0854	656.13	529.31	850.85	593.339	534.126	23.329	16.116	.7472	38.47	3.79	-51.337	.0805
12	8.1295	653.69	533.53	851.59	594.344	535.032	23.358	16.135	.7472	38.80	3.45	-113.387	.0804
13	8.1733	656.15	534.03	849.00	594.813	536.278	23.281	16.169	.7414	39.14	3.10	358.727	.0804
14	8.2179	647.21	534.45	839.35	595.287	537.570	23.202	16.216	.7346	39.55	2.73	65.216	.0804
15	8.2635	633.71	533.84	831.83	596.344	539.759	23.120	16.279	.7266	40.37	2.30	35.392	.0804
16	8.3110	605.97	554.39	823.45	599.026	543.582	23.032	16.363	.7168	42.31	1.76	25.176	.0803
17	8.3615	578.30	570.40	812.32	601.867	547.920	22.937	16.481	.7043	44.61	1.02	20.978	.0802
18	8.4157	551.19	578.97	798.70	603.651	551.503	22.878	16.645	.6903	46.46	.04	19.651	.0805
19	8.4745	515.30	580.10	780.47	605.296	555.505	22.823	16.870	.6721	48.67	-1.17	21.677	.0810
20	8.5409	457.49	593.90	755.87	607.145	560.450	22.761	17.172	.6481	51.80	-2.64	41.720	.0817
21	8.6199	401.75	603.15	724.71	609.338	566.421	22.688	17.542	.6181	56.33	-4.27	-27.461	.0826

BLADE DATA

LOCAT -ION	BLADE-ANGLES SECTION	BLADE-ANGLES LEAN	REL FLOW ANGLE	DEVIATION INCIDENCE	LOSS COEFF	BLADE SPEED	RELATIVE MACH NO	RELATIVE VELOCITY	RELATIVE PRESSURE	RELATIVE TEMPERATURE	PRESSURE RATIO	DELTA T ON T	ISENTROPIC EFFICIENCY	POLYTROPIC EFFICIENCY
1	48.817	-39.941	44.815	-4.003	0.0000	0.0	.6698	768.63	23.230	590.588	1.581	.139	1.0015	1.0014
2	48.015	-36.734	43.160	-4.855	0.0000	0.0	.6871	786.80	23.229	590.746	1.581	.139	1.0006	1.0005
3	47.273	-33.475	41.747	-5.527	0.0000	0.0	.7029	803.37	23.228	590.799	1.581	.139	.9997	.9997
4	46.738	-30.097	40.538	-6.100	0.0000	0.0	.7157	816.64	23.227	590.846	1.581	.139	.9990	.9991
5	46.315	-26.708	39.790	-6.525	0.0000	0.0	.7252	826.56	23.226	590.885	1.580	.139	.9984	.9985
6	45.904	-23.359	39.132	-6.831	0.0000	0.0	.7322	833.74	23.226	590.919	1.580	.139	.9978	.9979
7	45.641	-20.102	38.636	-7.006	0.0000	0.0	.7370	838.75	23.224	590.978	1.580	.139	.9968	.9970
8	45.341	-16.840	38.244	-7.097	0.0000	0.0	.7401	842.02	23.222	591.031	1.580	.139	.9959	.9962
9	45.071	-13.577	37.934	-7.137	0.0000	0.0	.7419	843.84	23.221	591.078	1.580	.140	.9951	.9954
10	44.947	-9.857	38.175	-6.672	0.0000	0.0	.7450	847.86	23.275	592.204	1.584	.142	.9852	.9861
11	44.690	-5.954	38.409	-6.221	0.0000	0.0	.7472	850.86	23.329	593.339	1.587	.144	.9755	.9770
12	44.628	-2.124	38.739	-5.829	0.0000	0.0	.7472	851.59	23.358	594.344	1.589	.146	.9652	.9674
13	44.682	1.327	39.142	-5.540	0.0000	0.0	.7414	840.00	23.281	594.813	1.584	.147	.9520	.9550
14	44.823	4.039	39.549	-5.274	0.0000	0.0	.7346	839.36	23.202	595.287	1.579	.148	.9386	.9424
15	44.997	8.779	40.374	-4.622	0.0000	0.0	.7265	831.83	23.120	596.344	1.573	.150	.9182	.9232
16	45.170	14.395	42.309	-2.861	0.0000	0.0	.7168	823.46	23.032	599.026	1.567	.155	.8795	.8868
17	45.480	21.404	44.009	-.871	0.0000	0.0	.7043	812.32	22.937	601.867	1.561	.160	.8411	.8507
18	45.149	28.926	46.460	.312	0.0000	0.0	.6903	798.70	22.878	603.651	1.557	.164	.8184	.8293
19	47.283	36.041	48.073	1.391	0.0000	0.0	.6721	780.47	22.823	605.296	1.553	.167	.7982	.8102
20	48.806	42.156	51.796	2.990	0.0000	0.0	.6481	755.87	22.761	607.145	1.549	.171	.7763	.7896
21	50.814	46.652	56.332	5.518	0.0000	0.0	.6181	724.71	22.688	609.338	1.544	.175	.7515	.7662

STATION 11 INTEGRATED PERFORMANCE PRESSURE RATIO = 1.573 ISEN. EFF.= .921 POLY. EFF.= .926 DELTA T ON T = .149

STATION 12 FLOW FIELD DESCRIPTION

STREAM -LINE	RADIUS	VELOCITIES MERID	VELOCITIES TANGEN	VELOCITIES TOTAL	TEMPERATURES TOTAL	TEMPERATURES STATIC	PRESSURES TOTAL	PRESSURES STATIC	MACH NO	ANGLES WHIRL	ANGLES SLOPE	RADIUS OF CURVATURE	SPECIFIC WEIGHT
1	7.7150	834.42	537.91	992.73	590.688	510.041	23.084	13.775	.8920	32.81	5.21	-3.688	.0728
2	7.7548	827.74	523.17	982.43	590.746	511.774	23.079	13.932	.8812	32.59	4.42	-3.627	.0726
3	7.7943	821.02	519.32	971.48	590.799	513.581	23.073	14.097	.8699	32.31	3.69	-3.628	.0732
4	7.8336	814.15	509.02	960.17	590.846	515.415	23.064	14.265	.8582	32.01	3.03	-3.677	.0738
5	7.8728	806.95	499.23	948.82	590.885	517.230	23.052	14.432	.8466	31.75	2.47	-3.795	.0744
6	7.9120	798.74	490.44	937.29	590.919	519.045	23.027	14.592	.8348	31.55	2.01	-3.968	.0750
7	7.9514	790.51	482.70	926.23	590.978	520.793	23.001	14.743	.8236	31.41	1.68	-4.188	.0755
8	7.9912	782.70	475.44	915.78	591.031	522.422	22.973	14.883	.8131	31.28	1.46	-4.454	.0760
9	8.0315	775.63	468.75	906.44	591.078	523.864	22.955	15.012	.8037	31.14	1.34	-4.772	.0764
10	8.0723	772.24	464.31	901.03	592.204	525.785	22.992	15.129	.7975	31.02	1.29	-5.154	.0767
11	8.1136	769.04	460.83	896.54	593.339	527.592	23.029	15.234	.7921	30.93	1.28	-5.668	.0770
12	8.1554	765.29	458.04	891.89	594.344	529.279	23.048	15.328	.7867	30.90	1.32	-6.322	.0772
13	8.1979	758.65	454.55	884.41	594.813	530.837	22.997	15.410	.7790	30.93	1.37	-7.208	.0774
14	8.2409	752.33	452.02	877.68	595.287	532.284	22.946	15.480	.7720	31.03	1.42	-8.458	.0776
15	8.2847	746.77	450.54	872.15	596.344	534.135	22.893	15.536	.7658	31.10	1.45	-10.440	.0776
16	8.3293	741.08	450.70	868.08	599.026	537.403	22.825	15.577	.7600	31.28	1.40	-14.621	.0773
17	8.3748	736.80	453.55	865.21	601.867	540.659	22.752	15.590	.7552	31.62	1.21	-30.156	.0769
18	8.4215	732.11	460.28	864.78	603.051	542.507	22.705	15.591	.7535	32.16	.84	106.517	.0766
19	8.4690	728.54	470.59	867.31	605.296	543.797	22.662	15.542	.7548	32.36	.25	17.484	.0762
20	8.5199	720.53	483.80	872.95	607.145	544.845	22.611	15.446	.7590	33.66	-.68	9.023	.0756
21	8.5730	725.71	499.84	881.19	609.338	545.862	22.549	15.308	.7655	34.56	-2.03	5.947	.0748

BLADE DATA

LOCAT -ION	BLADE-ANGLES SECTION	BLADE-ANGLES LEAN	REL FLOW ANGLE	DEVIATION INCIDENCE	LOSS COEFF	BLADE SPEED	RELATIVE MACH NO	RELATIVE VELOCITY	RELATIVE PRESSURE	RELATIVE TEMPERATURE	PRESSURE RATIO	DELTA T ON T	ISENTROPIC EFFICIENCY	POLYTROPIC EFFICIENCY
1	31.959	-24.847	32.908	.849	.0247	0.0	.8920	992.78	23.084	590.688	1.571	.139	.9868	.9876
2	31.735	-23.320	32.591	.856	.0239	0.0	.8812	982.43	23.079	590.746	1.570	.139	.9855	.9864
3	31.448	-21.305	32.315	.867	.0239	0.0	.8699	971.48	23.073	590.799	1.570	.139	.9841	.9851
4	31.131	-18.593	32.014	.883	.0244	0.0	.8582	960.17	23.064	590.846	1.569	.139	.9826	.9836
5	30.844	-16.615	31.746	.903	.0255	0.0	.8465	948.82	23.052	590.885	1.569	.139	.9808	.9820
6	30.626	-14.363	31.551	.925	.0285	0.0	.8349	937.29	23.027	590.919	1.567	.139	.9779	.9793
7	30.462	-12.235	31.409	.947	.0317	0.0	.8236	926.23	23.001	590.978	1.565	.139	.9744	.9760
8	30.307	-10.145	31.276	.969	.0352	0.0	.8131	915.78	22.973	591.031	1.563	.139	.9710	.9727
9	30.151	-8.015	31.140	.989	.0374	0.0	.8037	906.44	22.955	591.078	1.562	.140	.9685	.9704
10	30.009	-5.851	31.016	1.008	.0395	0.0	.7975	901.08	22.992	592.204	1.564	.142	.9573	.9599
11	29.908	-3.712	30.931	1.024	.0417	0.0	.7921	896.54	23.029	593.339	1.567	.144	.9463	.9496
12	29.864	-1.648	30.902	1.037	.0429	0.0	.7867	891.89	23.048	594.344	1.568	.146	.9356	.9395
13	29.881	.420	30.928	1.047	.0399	0.0	.7790	884.41	22.997	594.813	1.565	.147	.9250	.9295
14	29.947	2.672	30.999	1.052	.0365	0.0	.7720	877.68	22.946	595.287	1.561	.148	.9144	.9196
15	30.051	5.289	31.103	1.052	.0331	0.0	.7558	872.15	22.893	596.344	1.558	.150	.8969	.9032
16	30.233	8.352	31.282	1.049	.0309	0.0	.7600	868.08	22.825	599.026	1.553	.155	.8607	.8691
17	30.569	11.886	31.615	1.047	.0286	0.0	.7552	865.21	22.752	601.867	1.548	.160	.8249	.8353
18	31.111	15.878	32.158	1.047	.0277	0.0	.7535	864.78	22.705	603.051	1.545	.164	.8035	.8151
19	31.808	20.115	32.860	1.051	.0271	0.0	.7543	867.31	22.662	605.296	1.542	.167	.7845	.7972
20	32.595	24.236	33.656	1.061	.0268	0.0	.7590	872.95	22.611	607.145	1.539	.171	.7639	.7777
21	33.478	28.225	34.557	1.079	.0270	0.0	.7655	881.19	22.543	609.338	1.534	.175	.7483	.7553

STATION 12 INTEGRATED PERFORMANCE PRESSURE RATIO = 1.559 ISEN. EFF.= .901 POLY. EFF.= .907 DELTA T ON T = .149

STATION 13 FLOW FIELD DESCRIPTION

STREAM LINE	RADIUS	VELOCITIES MERID	VELOCITIES TANGEN	VELOCITIES TOTAL	TEMPERATURES TOTAL	TEMPERATURES STATIC	PRESSURES TOTAL	PRESSURES STATIC	MACH NO	ANGLES WHIRL	ANGLES SLOPE	RADIUS OF CURVATURE	SPECIFIC WEIGHT
1	7.7230	759.65	240.76	796.90	590.688	538.749	22.944	16.596	.6968	17.58	-2.23	-5.196	.0822
2	7.7570	746.95	236.08	783.39	590.746	540.555	22.[illegible]	16.775	.6838	17.54	-2.39	-5.854	.0828
3	7.7918	734.61	231.94	770.36	590.799	542.266	22.911	16.945	.6714	17.52	-2.51	-6.686	.0833
4	7.8274	722.67	228.22	757.85	590.846	543.877	22.892	17.103	.6595	17.53	-2.58	-7.738	.0839
5	7.8640	711.29	224.65	745.92	590.885	545.384	22.869	17.250	.6483	17.53	-2.60	-9.058	.0843
6	7.9015	699.65	220.59	733.60	590.919	546.911	22.823	17.381	.6367	17.50	-2.56	-10.704	.0848
7	7.9402	689.05	216.47	722.25	590.978	548.320	22.773	17.495	.6260	17.44	-2.45	-12.731	.0851
8	7.9801	679.64	212.70	712.15	591.031	549.561	22.722	17.589	.6166	17.38	-2.28	-15.175	.0854
9	8.0212	672.42	210.19	704.51	591.078	550.493	22.689	17.664	.6094	17.36	-2.05	-18.024	.0856
10	8.0633	669.90	209.74	701.97	592.204	551.913	22.709	17.721	.6065	17.38	-1.77	-21.158	.0856
11	8.1062	668.43	209.86	700.59	593.339	553.208	22.729	17.763	.6046	17.43	-1.47	-24.406	.0856
12	8.1500	667.31	209.94	699.55	594.344	554.333	22.739	17.793	.6031	17.46	-1.16	-27.534	.0856
13	8.1946	664.75	209.39	696.95	594.813	555.161	22.714	17.810	.6004	17.48	-.83	-30.106	.0856
14	8.2401	663.03	209.14	695.23	595.287	555.771	22.689	17.816	.5986	17.51	-.51	-31.727	.0855
15	8.2863	662.33	209.46	694.67	596.344	556.894	22.664	17.811	.5975	17.55	-.20	-32.589	.0853
16	8.3333	661.82	210.37	694.45	599.026	559.605	22.614	17.795	.5959	17.63	.10	-33.392	.0848
17	8.3812	661.92	212.37	695.15	601.867	562.371	22.561	17.765	.5950	17.79	.38	-35.281	.0842
18	8.4295	663.35	216.03	697.65	603.651	563.873	22.525	17.718	.5963	18.04	.63	-40.830	.0838
19	8.4790	666.22	221.34	702.02	605.296	565.020	22.494	17.651	.5995	18.38	.82	-59.363	.0833
20	8.5289	670.35	227.97	708.06	607.145	566.175	22.458	17.560	.6040	18.78	.91	-223.782	.0827
21	8.5795	675.70	235.09	715.63	609.338	567.491	22.414	17.446	.6098	19.23	.88	76.314	.0828

BLADE DATA

LOCAT-ION	BLADE-ANGLES SECTION	BLADE-ANGLES LEAN	REL FLOW ANGLE	DEVIATION INCIDENCE	LOSS COEFF	BLADE SPEED	RELATIVE MACH NO	RELATIVE VELOCITY	RELATIVE PRESSURE	RELATIVE TEMPERATURE	PRESSURE RATIO	DELTA T ON T	ISENTROPIC EFFICIENCY	POLYTROPIC EFFICIENCY
1	16.234	-9.41[illegible]	17.585	1.351	.0476	0.0	.6968	796.90	22.944	590.688	1.561	.139	.9726	.9742
2	16.185	-8.921	17.539	1.354	.0480	0.0	.6838	783.39	22.928	590.746	1.560	.139	.9702	.9720
3	16.159	-8.361	17.523	1.364	.0487	0.0	.6714	770.36	22.911	590.799	1.559	.139	.9678	.9697
4	16.142	-7.724	17.526	1.383	.0500	0.0	.6595	757.85	22.892	590.846	1.558	.139	.9652	.9673
5	16.116	-6.997	17.528	1.412	.0521	0.0	.6483	745.92	22.869	590.885	1.556	.139	.9624	.9647
6	16.053	-6.163	17.499	1.447	.0579	0.0	.6367	733.60	22.823	590.919	1.553	.139	.9573	.9598
7	15.955	-5.237	17.440	1.485	.0641	0.0	.6260	722.26	22.773	590.978	1.550	.139	.9515	.9544
8	15.854	-4.258	17.378	1.524	.0708	0.0	.6165	712.15	22.722	591.031	1.546	.139	.9455	.9487
9	15.797	-3.273	17.358	1.561	.0749	0.0	.6094	704.51	22.689	591.078	1.544	.140	.9415	.9450
10	15.790	-2.337	17.385	1.595	.0790	0.0	.6065	701.97	22.709	592.204	1.545	.142	.9291	.9333
11	15.805	-1.457	17.430	1.625	.0832	0.0	.6046	700.59	22.729	593.339	1.547	.144	.9178	.9219
12	15.813	-.801	17.464	1.651	.0857	0.0	.6031	699.55	22.739	594.344	1.547	.146	.9058	.9114
13	15.814	-.209	17.484	1.670	.0797	0.0	.6004	696.95	22.714	594.813	1.546	.147	.8977	.9038
14	15.826	.401	17.507	1.680	.0734	0.0	.5986	695.23	22.689	595.287	1.544	.146	.8898	.8963
15	15.867	1.150	17.550	1.682	.0667	0.0	.5975	694.67	22.664	596.344	1.542	.150	.8752	.8826
16	15.956	2.059	17.633	1.677	.0625	0.0	.5959	694.45	22.614	599.026	1.539	.155	.8414	.8507
17	16.116	3.092	17.788	1.672	.0583	0.0	.5950	695.15	22.561	601.867	1.535	.160	.8079	.8191
18	15.3[illegible]8	4.226	18.039	1.671	.0565	0.0	.5963	697.65	22.525	603.651	1.533	.164	.7878	.8001
19	16.764	5.493	18.378	1.674	.0552	0.0	.5995	702.02	22.494	605.296	1.531	.167	.7702	.7835
20	17.09[illegible]	6.935	18.782	1.686	.0542	0.0	.6040	708.06	22.458	607.145	1.528	.171	.7511	.7654
21	17.514	8.542	19.229	1.719	.0532	0.0	.6098	715.63	22.414	609.338	1.525	.175	.7293	.7448

STATION 13 INTEGRATED PERFORMANCE PRESSURE RATIO = 1.544 ISEN. EFF. = .881 POLY. EFF. = .888 DELTA T ON T = .149

STATION 14 FLOW FIELD DESCRIPTION

STREAM -LINE	RADIUS	------VELOCITIES------- MERID	TANGEN	TOTAL	--TEMPERATURES-- TOTAL	STATIC	---PRESSURES--- TOTAL	STATIC	MACH NO	---ANGLES--- WHIRL	SLOPE	RADIUS OF CURVATURE	SPECIFIC WEIGHT
1	7.6720	621.05	67.28	624.69	590.688	558.783	22.802	18.754	.5364	6.18	-4.29	16.241	.0895
2	7.7037	619.06	65.69	622.54	590.746	559.061	22.774	18.757	.5344	6.06	-4.10	17.218	.0895
3	7.7403	616.97	64.23	620.31	590.799	559.341	22.744	18.759	.5324	5.94	-3.90	18.345	.0894
4	7.7876	614.77	62.97	617.98	590.846	559.523	22.712	18.761	.5302	5.85	-3.69	19.651	.0894
5	7.8279	612.35	61.89	615.50	590.885	559.913	22.678	18.763	.5280	5.77	-3.47	21.170	.0894
6	7.8630	607.58	60.70	610.61	590.919	560.437	22.609	18.764	.5235	5.71	-3.22	22.957	.0893
7	7.9113	602.58	59.59	605.51	590.978	561.003	22.537	18.764	.5189	5.65	-2.96	25.102	.0892
8	7.9547	597.35	58.54	600.21	591.031	561.579	22.462	18.763	.5141	5.60	-2.66	27.714	.0891
9	7.9992	594.13	57.81	596.99	591.078	561.942	22.416	18.761	.5112	5.56	-2.34	30.888	.0890
10	8.0446	595.39	57.61	598.17	592.204	562.953	22.421	18.759	.5117	5.53	-2.00	34.545	.0889
11	8.0907	596.73	57.53	599.49	593.339	563.960	22.426	18.754	.5124	5.51	-1.66	38.476	.0887
12	8.1375	597.99	57.54	600.76	594.344	564.842	22.429	18.748	.5131	5.50	-1.32	42.553	.0885
13	8.1849	599.09	57.61	601.86	594.813	565.204	22.431	18.741	.5139	5.49	-.99	47.407	.0884
14	8.2330	600.43	57.76	603.20	595.287	565.545	22.435	18.731	.5149	5.49	-.68	54.841	.0883
15	8.2816	602.20	58.05	604.99	596.344	566.427	22.438	18.719	.5160	5.51	-.39	63.374	.0881
16	8.3310	602.47	58.35	605.29	599.026	569.083	22.408	18.706	.5150	5.53	-.12	77.360	.0877
17	8.3812	602.65	58.93	605.53	601.867	571.904	22.375	18.692	.5140	5.58	.14	100.444	.0872
18	8.4323	602.38	59.90	605.85	603.651	573.558	22.350	18.678	.5135	5.67	.39	145.502	.0868
19	8.4840	603.34	61.49	606.46	605.296	575.244	22.330	18.663	.5133	5.82	.63	263.610	.0865
20	8.5355	603.59	63.83	606.96	607.145	577.045	22.307	18.649	.5129	6.04	.86	1070.660	.0862
21	8.5900	603.61	66.92	607.31	609.338	579.207	22.279	18.634	.5123	6.33	1.06	-610.607	.0858

BLADE DATA

LOCAT -ION	BLADE-ANGLES SECTION	LEAN	REL FLOW ANGLE	DEVIATION INCIDENCE	LOSS COEFF	BLADE SPEED	RELATIVE MACH NO	RELATIVE VELOCITY	RELATIVE PRESSURE	RELATIVE TEMPERATURE	PRESSURE RATIO	DELTA T ON T	ISENTROPIC EFFICIENCY	POLYTROPIC EFFICIENCY
1	3.965	-1.054	6.183	2.218	.0713	0.0	.5364	624.69	22.802	590.688	1.552	.139	.9582	.9687
2	3.834	-.995	6.057	2.223	.0725	0.0	.5344	622.54	22.774	590.746	1.550	.139	.9545	.9573
3	3.702	-.922	5.943	2.241	.0743	0.0	.5324	620.31	22.744	590.799	1.548	.139	.9508	.9537
4	3.575	-.839	5.849	2.273	.0767	0.0	.5302	617.98	22.712	590.846	1.545	.139	.9470	.9501
5	3.453	-.751	5.771	2.318	.0800	0.0	.5280	615.50	22.678	590.885	1.543	.139	.9438	.9464
6	3.334	-.664	5.705	2.371	.0885	0.0	.5235	610.61	22.609	590.919	1.538	.139	.9355	.9393
7	3.217	-.586	5.647	2.431	.0977	0.0	.5189	605.51	22.537	590.978	1.534	.139	.9274	.9316
8	3.103	-.518	5.597	2.494	.1074	0.0	.5141	600.21	22.462	591.031	1.528	.139	.9191	.9237
9	2.999	-.460	5.557	2.558	.1134	0.0	.5112	596.99	22.416	591.078	1.525	.140	.9137	.9186
10	2.909	-.408	5.527	2.618	.1192	0.0	.5117	598.17	22.421	592.204	1.526	.142	.9002	.9059
11	2.836	-.354	5.507	2.671	.1253	0.0	.5124	599.49	22.426	593.339	1.526	.144	.8878	.8935
12	2.783	-.282	5.496	2.713	.1287	0.0	.5131	600.76	22.429	594.344	1.526	.146	.8755	.8827
13	2.753	-.198	5.492	2.740	.1194	0.0	.5139	601.86	22.431	594.813	1.526	.147	.8783	.8778
14	2.747	-.141	5.494	2.746	.1093	0.0	.5149	603.20	22.435	595.287	1.527	.148	.8653	.8730
15	2.769	-.157	5.506	2.737	.0997	0.0	.5160	604.99	22.438	596.344	1.527	.150	.8538	.8622
16	2.817	-.255	5.533	2.715	.0935	0.0	.5150	605.29	22.408	599.026	1.525	.155	.8225	.8326
17	2.889	-.421	5.585	2.695	.0871	0.0	.5140	605.53	22.375	601.867	1.523	.160	.7914	.8033
18	2.983	-.631	5.674	2.691	.0847	0.0	.5135	605.85	22.350	603.651	1.521	.164	.7725	.7855
19	3.112	-.833	5.819	2.706	.0829	0.0	.5133	606.46	22.330	605.296	1.519	.167	.7561	.7780
20	3.296	-.974	6.037	2.747	.0814	0.0	.5129	606.96	22.307	607.145	1.518	.174	.7383	.7532
21	3.508	-1.055	6.326	2.818	.0794	0.0	.5123	607.31	22.279	609.338	1.516	.175	.7182	.7341

STATION 14 INTEGRATED PERFORMANCE PRESSURE RATIO = 1.529 ISEN. EFF.= .860 POLY. EFF.= .858 DELTA T ON T = .149

STATION 15 FLOW FIELD DESCRIPTION

STREAM -LINE	RADIUS	------VELOCITIES------- MERID	TANGEN	TOTAL	--TEMPERATURES-- TOTAL	STATIC	---PRESSURES--- TOTAL	STATIC	MACH NO	---ANGLES--- WHIRL	SLOPE	RADIUS OF CURVATURE	SPECIFIC WEIGHT
1	7.6400	577.29	0.00	577.29	590.688	563.444	22.661	19.191	.4936	0.00	-1.66	10.624	.0988
2	7.6735	576.32	0.00	576.32	590.746	563.593	22.620	19.167	.4928	0.00	-1.63	11.078	.0987
3	7.7139	575.21	0.00	575.21	590.799	563.751	22.577	19.143	.4917	0.00	-1.59	11.588	.0986
4	7.7612	573.95	0.00	573.95	590.846	563.916	22.533	19.120	.4906	0.00	-1.55	12.198	.0984
5	7.8035	572.41	0.00	572.41	590.885	564.099	22.487	19.098	.4892	0.00	-1.49	12.925	.0983
6	7.8467	567.23	0.00	567.23	590.919	564.517	22.394	19.077	.4845	0.00	-1.41	13.846	.0901
7	7.8912	561.63	0.00	561.63	590.978	565.193	22.299	19.058	.4795	0.00	-1.32	15.091	.0899
8	7.9370	555.54	0.00	555.54	591.031	565.802	22.201	19.040	.4741	0.00	-1.21	16.843	.0897
9	7.9839	552.30	0.00	552.30	591.078	566.143	22.142	19.024	.4712	0.00	-1.08	19.363	.0896
10	8.0313	553.41	0.00	553.41	592.204	567.169	22.133	19.010	.4717	0.00	-.93	23.064	.0894
11	8.0803	554.31	0.00	554.31	593.339	568.224	22.124	18.999	.4720	0.00	-.78	28.895	.0892
12	8.1295	555.34	0.00	555.34	594.344	569.136	22.120	18.990	.4725	0.00	-.61	39.208	.0890
13	8.1794	558.53	0.00	558.53	594.813	569.315	22.150	18.983	.4752	0.00	-.45	59.823	.0889
14	8.2296	561.48	0.00	561.48	595.287	569.513	22.179	18.979	.4775	0.00	-.30	113.813	.0889
15	8.2802	564.51	0.00	564.51	596.344	570.299	22.209	18.978	.4798	0.00	-.16	581.558	.0887
16	8.3314	564.71	0.00	564.71	599.026	572.365	22.196	18.978	.4789	0.00	-.03	-213.773	.0883
17	8.3835	564.69	0.00	564.69	601.867	575.812	22.182	18.980	.4777	0.00	.10	-94.512	.0879
18	8.4365	563.96	0.00	563.96	603.651	577.565	22.157	18.985	.4763	0.00	.22	-62.308	.0876
19	8.4902	563.51	0.00	563.51	605.296	579.352	22.160	18.991	.4753	0.00	.33	-47.372	.0874
20	8.5447	563.04	0.00	563.04	607.145	581.246	22.152	18.999	.4741	0.00	.43	-39.012	.0872
21	8.6000	562.57	0.00	562.57	609.338	583.485	22.144	19.008	.4729	0.00	.52	-33.985	.0869

BLADE DATA

LOCAT -ION	BLADE-ANGLES SECTION	LEAN	REL FLOW ANGLE	DEVIATION INCIDENCE	LOSS COEFF	BLADE SPEED	RELATIVE MACH NO	RELATIVE VELOCITY	RELATIVE PRESSURE	RELATIVE TEMPERATURE	PRESSURE RATIO	DELTA T ON T	ISENTROPIC EFFICIENCY	POLYTROPIC EFFICIENCY
1	-7.239	.020	0.000	7.239	.0944	0.0	.4936	577.29	22.661	590.688	1.542	.139	.9439	.9472
2	-7.395	.020	0.000	7.395	.0970	0.0	.4928	576.32	22.620	590.746	1.539	.139	.9386	.9424
3	-7.560	.019	0.000	7.560	.0999	0.0	.4917	575.21	22.577	590.799	1.536	.139	.9338	.9376
4	-7.729	.018	0.000	7.729	.1035	0.0	.4905	573.95	22.533	590.846	1.533	.139	.9287	.9328
5	-7.898	.016	0.000	7.898	.1080	0.0	.4892	572.41	22.487	590.885	1.530	.139	.9234	.9279
6	-8.066	.013	0.000	8.066	.1195	0.0	.4845	567.23	22.394	590.919	1.524	.139	.9135	.9185
7	-8.233	.011	0.000	8.233	.1315	0.0	.4795	561.63	22.299	590.978	1.517	.139	.9038	.9085
8	-8.396	.010	0.000	8.396	.1444	0.0	.4741	555.54	22.201	591.031	1.511	.139	.8922	.8983
9	-8.550	.009	0.000	8.550	.1520	0.0	.4712	552.30	22.142	591.078	1.507	.140	.8855	.8919
10	-8.690	.007	0.000	8.690	.1594	0.0	.4717	553.41	22.133	592.204	1.506	.142	.8710	.8782
11	-8.812	.005	0.000	8.812	.1671	0.0	.4720	554.31	22.124	593.339	1.505	.144	.8569	.8648
12	-8.914	.003	0.000	8.914	.1714	0.0	.4725	555.34	22.120	594.344	1.505	.146	.8451	.8537
13	-8.994	.001	0.000	8.994	.1591	0.0	.4752	558.53	22.150	594.813	1.507	.147	.8428	.8516
14	-9.045	-.002	0.000	9.045	.1464	0.0	.4775	561.48	22.179	595.287	1.509	.148	.8404	.8494
15	-9.063	-.004	0.000	9.063	.1332	0.0	.4798	564.51	22.209	596.344	1.511	.150	.8319	.8413
16	-9.059	-.008	0.000	9.059	.1253	0.0	.4789	564.71	22.196	599.026	1.510	.155	.8028	.8139
17	-9.060	-.012	0.000	9.060	.1170	0.0	.4777	564.69	22.182	601.867	1.509	.160	.7741	.7867
18	-9.085	-.018	0.000	9.085	.1140	0.0	.4763	563.96	22.167	603.651	1.508	.164	.7565	.7701
19	-9.126	-.024	0.000	9.126	.1115	0.0	.4753	563.51	22.160	605.296	1.508	.167	.7415	.7559
20	-9.169	-.031	0.000	9.169	.1090	0.0	.4741	563.04	22.152	607.145	1.507	.171	.7253	.7406
21	-9.213	-.038	0.000	9.213	.1055	0.0	.4728	562.57	22.144	609.338	1.507	.175	.7071	.7234

STATION 15 INTEGRATED-PERFORMANCE PRESSURE RATIO = 1.514 ISEN. EFF.= .839 POLY. EFF.= .848 DELTA T ON T = .149

STATION 16 FLOW FIELD DESCRIPTION

STREAM -LINE	RADIUS	VELOCITIES MERID	VELOCITIES TANGEN	VELOCITIES TOTAL	TEMPERATURES TOTAL	TEMPERATURES STATIC	PRESSURES TOTAL	PRESSURES STATIC	MACH NO	ANGLES WHIRL	ANGLES SLOPE	RADIUS OF CURVATURE	SPECIFIC WEIGHT
1	7.6400	592.25	0.00	592.25	590.688	562.012	22.661	19.020	.5071	0.00	0.00	0.000	.0903
2	7.6788	589.24	0.00	589.24	590.746	562.362	22.620	19.020	.5044	0.00	-.03	1160.356	.0902
3	7.7187	586.14	0.00	586.14	590.799	562.713	22.577	19.019	.5015	0.00	-.05	622.714	.0901
4	7.7595	582.96	0.00	582.96	590.846	563.064	22.533	19.019	.4987	0.00	-.08	448.557	.0901
5	7.8013	579.57	0.00	579.57	590.885	563.425	22.487	19.018	.4956	0.00	-.09	366.245	.0900
6	7.8443	572.66	0.00	572.66	590.919	564.110	22.394	19.017	.4894	0.00	-.11	321.255	.0899
7	7.8886	565.43	0.00	565.43	590.978	564.843	22.299	19.016	.4829	0.00	-.12	295.989	.0896
8	7.9342	557.83	0.00	557.83	591.031	565.594	22.201	19.015	.4761	0.00	-.12	283.662	.0897
9	7.9811	553.21	0.00	553.21	591.078	566.061	22.142	19.014	.4720	0.00	-.12	281.512	[illegible]
10	8.0290	553.12	0.00	553.12	592.204	567.196	22.133	19.013	.4714	0.00	-.12	288.655	.0894
11	8.0777	553.02	0.00	553.02	593.339	568.340	22.124	19.013	.4709	0.00	-.11	305.321	.0892
12	8.1272	553.29	0.00	553.29	594.344	569.322	22.120	19.012	.4707	0.00	-.11	333.057	.0891
13	8.1772	555.95	0.00	555.95	594.813	569.550	22.150	19.011	.4729	0.00	-.09	374.766	.0890
14	8.2277	558.62	0.00	558.62	595.257	569.782	22.179	19.010	.4750	0.00	-.08	[illegible]35.502	.0898
15	8.2786	561.55	0.00	561.55	596.344	570.571	22.209	19.009	.4772	0.00	-.07	524.709	.0886
16	8.3302	561.84	0.00	561.84	599.026	573.230	22.196	19.009	.4764	0.00	-.05	661.807	.0884
17	8.3826	562.05	0.00	562.06	501.867	576.053	22.182	19.008	.4754	0.00	-.04	889.227	.0880
18	8.4358	561.75	0.00	561.76	503.651	577.867	22.167	19.008	.4744	0.00	-.03	1310.289	.0877
19	8.4898	561.90	0.00	561.90	605.296	579.501	22.160	19.008	.4738	0.00	-.02	2251.112	.0875
20	8.5445	562.15	0.00	562.15	507.145	581.327	22.152	19.008	.4733	0.00	-.01	5418.267	.0872
21	8.6000	562.57	0.00	562.57	509.338	583.485	22.144	19.008	.4728	0.00	0.00	0.000	.0869

STATION 17 FLOW FIELD DESCRIPTION

STREAM -LINE	RADIUS	VELOCITIES MERID	VELOCITIES TANGEN	VELOCITIES TOTAL	TEMPERATURES TOTAL	TEMPERATURES STATIC	PRESSURES TOTAL	PRESSURES STATIC	MACH NO	ANGLES WHIRL	ANGLES SLOPE	RADIUS OF CURVATURE	SPECIFIC WEIGHT
1	7.6400	593.29	0.00	593.29	590.668	561.912	22.661	19.008	.5080	0.00	0.00	0.000	.0902
2	7.6785	590.27	0.00	590.27	590.746	562.262	22.620	19.008	.5053	0.00	-.00	0.000	.0902
3	7.7186	587.15	0.00	587.15	590.799	562.616	22.577	19.008	.5025	0.00	-.00	0.000	.0901
4	7.7594	583.93	0.00	583.93	590.846	562.971	22.533	19.008	.4995	0.00	-.00	0.000	.0900
5	7.8012	580.49	0.00	580.49	590.885	563.338	22.487	19.008	.4964	0.00	-.00	0.000	.0900
6	7.8441	573.52	0.00	573.52	590.919	564.030	22.394	19.008	.4902	0.00	-.00	0.000	.0899
7	7.8884	566.21	0.00	566.21	590.978	564.770	22.299	19.008	.4836	0.00	-.01	0.000	.0898
8	7.9340	558.54	0.00	558.54	591.031	565.529	22.201	19.008	.4767	0.00	-.01	0.000	.0896
9	7.9809	553.83	0.00	553.83	591.078	566.004	22.142	19.008	.4725	0.00	-.01	0.000	.0896
10	8.0288	553.65	0.00	553.65	592.204	567.147	22.133	19.008	.4719	0.00	-.01	0.000	.0894
11	8.0775	553.47	0.00	553.47	593.339	568.300	22.124	19.008	.4713	0.00	-.01	0.000	.0892
12	8.1270	553.65	0.00	553.65	594.344	569.289	22.120	19.008	.4710	0.00	-.01	0.000	.0890
13	8.1770	556.23	0.00	556.23	594.813	569.525	22.150	19.008	.4731	0.00	-.01	0.000	.0890
14	8.2275	558.82	0.00	558.82	595.287	569.763	22.179	19.008	.4752	0.00	-.01	0.000	.0890
15	8.2785	561.70	0.00	561.70	596.344	570.557	22.209	19.008	.4773	0.00	-.01	0.000	.0888
16	8.3300	561.93	0.00	561.93	599.026	573.221	22.196	19.008	.4764	0.00	-.01	0.000	.0884
17	8.3825	562.12	0.00	562.12	501.867	576.048	22.182	19.008	.4754	0.00	-.00	0.000	.0880
18	8.4357	561.79	0.00	561.79	503.651	577.865	22.167	19.008	.4744	0.00	-.00	0.000	.0877
19	8.4898	561.91	0.00	561.91	605.296	579.499	22.160	19.008	.4739	0.00	-.00	0.000	.0875
20	8.5445	562.17	0.00	562.17	507.145	581.327	22.152	19.008	.4733	0.00	-.00	0.000	.0872
21	8.6000	562.57	0.00	562.57	609.338	583.485	22.144	19.008	.4728	0.00	0.00	0.000	.0869

ROTOR PERFORMANCE

LOCAT -ION	INLET RADIUS	OUTLET RADIUS	INLET M. NO	INCID -ENCE	DEVIA -TION	LOSS COEFF	2-D D FACTOR	3-D D FACTOR	DELTA P ON Q	REL V RATIO	DELTA H/U**2	SECTION-ANGLES INLET	SECTION-ANGLES OUTLET	LEAN-ANGLES INLET	LEAN-ANGLES OUTLET
1	6.7500	7.5499	.6835	7.860	14.145	-.0025	.3552	.3743	.6026	.7723	.6754	-62.667	-11.816	17.285	2.339
2	6.8659	7.5940	.6949	8.022	13.832	-.0009	.3798	.3880	.5957	.7594	.6721	-62.598	-12.929	16.457	2.639
3	6.9806	7.6390	.7062	8.110	13.527	.0004	.3926	.3998	.5877	.7481	.6647	-62.601	-14.053	15.458	2.924
4	7.0942	7.6849	.7174	8.135	13.196	.0016	.4036	.4101	.5790	.7383	.6572	-62.678	-15.165	14.176	3.236
5	7.2068	7.7316	.7284	8.157	12.883	.0025	.4132	.4188	.5698	.7295	.6496	-62.736	-16.243	12.881	3.556
6	7.3185	7.7791	.7393	8.235	12.513	.0032	.4215	.4263	.5602	.7224	.6420	-62.774	-17.262	11.488	3.863
7	7.4294	7.8273	.7501	8.296	12.405	.0045	.4290	.4331	.5504	.7155	.6346	-62.830	-18.197	10.334	4.133
8	7.5396	7.8762	.7607	8.321	12.272	.0057	.4355	.4385	.5403	.7095	.6272	-62.933	-19.042	9.413	4.358
9	7.6492	7.9259	.7711	8.340	12.203	.0065	.4411	.4438	.5300	.7044	.6198	-63.059	-19.806	8.588	4.542
10	7.7586	7.9762	.7814	8.332	11.537	.0199	.4552	.4574	.5195	.6927	.6215	-63.180	-20.499	7.732	4.687
11	7.8676	8.0275	.7915	8.446	11.244	.0324	.4594	.4700	.5088	.6828	.6231	-63.298	-21.135	6.898	4.800
12	7.9770	8.0795	.8017	8.524	10.370	.0453	.4808	.4818	.4978	.6715	.6234	-63.421	-21.725	6.197	4.885
13	8.0865	8.1333	.8117	8.621	11.301	.0514	.4934	.4938	.4865	.6595	.6190	-63.545	-22.278	5.668	4.941
14	8.1364	8.1883	.8216	8.751	11.536	.0758	.5050	.5049	.4748	.6484	.6145	-63.658	-22.794	5.258	4.961
15	8.3069	8.2451	.8314	8.922	12.044	.1010	.5230	.5225	.4629	.6320	.6145	-63.756	-23.268	4.933	4.937
16	8.4184	8.3043	.8412	9.132	12.336	.1488	.5509	.5598	.4509	.5987	.6266	-63.842	-23.702	4.594	4.855
17	8.5310	8.3690	.8509	9.370	12.948	.1964	.6009	.5993	.4394	.5632	.6389	-63.928	-24.097	4.156	4.781
18	8.6451	8.4376	.8606	9.621	13.712	.2229	.6236	.6216	.4283	.5427	.6421	-64.031	-24.439	3.623	4.476
19	8.7611	8.5100	.8703	9.673	14.705	.2457	.6434	.6410	.4177	.5245	.6434	-64.170	-24.709	3.028	4.283
20	8.8792	8.5865	.8800	10.148	16.117	.2704	.6662	.6635	.4079	.5035	.6455	-64.329	-24.898	2.481	3.986
21	9.0000	8.6699	.8898	10.487	18.324	.2991	.6553	.6923	.3797	.4764	.6489	-64.476	-24.964	1.836	3.617

STATOR PERFORMANCE

LOCAT -ION	INLET RADIUS	OUTLET RADIUS	INLET M. NO	INCID -ENCE	DEVIA -TION	LOSS COEFF	2-D D FACTOR	3-D D FACTOR	DELTA P ON Q	REL V RATIO	DELTA H/U**2	SECTION-ANGLES INLET	SECTION-ANGLES OUTLET	LEAN-ANGLES INLET	LEAN-ANGLES OUTLET
1	7.6199	7.6480	.6696	-4.003	7.239	.0944	.3956	.3954	.3297	.7511	0.0000	48.817	-7.239	-39.941	.828
2	7.6763	7.6795	.6871	-4.655	7.335	.0970	.4172	.4171	.3533	.7325	0.0000	48.015	-7.395	-36.794	.820
3	7.7291	7.7193	.7029	-5.527	7.550	.0999	.4365	.4366	.3732	.7160	0.0000	47.273	-7.558	-33.475	.819
4	7.7785	7.7512	.7157	-6.100	7.729	.1035	.4524	.4525	.3878	.7023	0.0000	46.738	-7.729	-30.097	.818
5	7.8252	7.8035	.7252	-6.525	7.898	.1080	.4652	.4654	.3975	.6925	0.0000	46.315	-7.898	-26.788	.816
6	7.8703	7.8467	.7322	-6.631	8.056	.1195	.4797	.4800	.4037	.6803	0.0000	45.964	-8.066	-23.359	.813
7	7.9143	7.8912	.7370	-7.006	8.233	.1316	.4928	.4930	.4073	.6695	0.0000	45.641	-8.233	-20.182	.811
8	7.9577	7.9370	.7401	-7.097	8.393	.1444	.5048	.5050	.4089	.6593	0.0000	45.341	-8.396	-16.889	.810
9	8.0006	7.9839	.7419	-7.137	8.550	.1520	.5119	.5120	.4090	.6545	0.0000	45.071	-8.550	-13.537	.808
10	8.0435	8.0318	.745	-6.672	8.590	.1594	.5159	.5171	.4049	.6527	0.0000	44.847	-8.690	-9.867	.807
11	8.0864	8.0803	.7472	-6.221	8.812	.1571	.5211	.5212	.3997	.6515	0.0000	44.690	-8.812	-5.954	.805
12	8.1296	8.1290	.7472	-5.829	8.914	.1714	.5228	.5228	.3952	.6521	0.0000	44.628	-8.914	-2.124	.803
13	8.1733	8.1794	.7414	-5.540	8.994	.1591	.5165	.5165	.3957	.6602	0.0000	44.682	-8.994	1.327	-.001
14	8.2179	8.2296	.7346	-5.274	9.045	.1464	.5091	.5089	.3955	.6683	0.0000	44.823	-9.045	4.699	-.002
15	8.2635	8.2802	.7206	-4.622	9.063	.1332	.5014	.5013	.3945	.6785	0.0000	44.997	-9.063	8.779	-.004
16	8.3110	8.3314	.7153	-2.661	9.059	.1253	.4995	.4992	.3921	.6855	0.0000	45.178	-9.059	14.395	-.008
17	8.3615	8.3835	.7043	-.671	9.060	.1170	.4951	.4949	.3871	.6952	0.0000	45.480	-9.060	21.404	-.012
18	8.4157	8.4365	.6903	.312	9.085	.1140	.4958	.4856	.3754	.7061	0.0000	46.148	-9.085	28.926	-.018
19	8.4745	8.4902	.6721	1.391	9.126	.1115	.4704	.4702	.3562	.7223	0.0000	47.283	-9.126	36.041	-.024
20	8.5409	8.5447	.6481	2.990	9.169	.1090	.4478	.4478	.3268	.7443	0.0000	48.806	-9.169	42.156	-.031
21	8.6199	8.6000	.6181	5.514	9.213	.1055	.4167	.4169	.2849	.7763	0.0000	50.814	-9.213	46.652	-.038

WAKE AND BOUNDARY LAYER BLOCKAGES (PERCENT)

STATION	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17
MID BLOCKAGE	0.0	0.0	0.0	0.0	11.9	9.2	6.7	7.6	3.5	5.9	6.0	7.0	8.0	9.0	11.8	12.8	12.9
DIST FACTOR	1.0	1.0	1.0	1.0	.5	.5	.3	0.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
INT BLOCKAGE	0.0	0.0	0.0	0.0	12.2	9.3	6.9	7.8	3.5	5.9	6.0	7.0	8.0	9.0	11.8	12.8	12.9

SUMMARY POINT NO. 1 THE CALCULATION IS CONVERGED PASS 21

TEST POINT TITLE = 203221315260

FLOW = 14.68 SPEED = 12214.9 PRESSURE RATIO = 1.514 ISENTROPIC EFFY = .8387 POLYTROPIC EFFY = .8478 DEL T/T = .1493

4. PHASE II WITHIN - BLADE ANALYSIS
(70% SPEED)
TEST POINT 208240215670

STATION 1 FLOW FIELD DESCRIPTION

STREAM -LINE	RADIUS	VELOCITIES MERID	VELOCITIES TANGEN	VELOCITIES TOTAL	TEMPERATURES TOTAL	TEMPERATURES STATIC	PRESSURES TOTAL	PRESSURES STATIC	MACH NO	ANGLES WHIRL	ANGLES SLOPE	RADIUS OF CURVATURE	SPECIFIC WEIGHT
1	6.0686	232.71	0.00	232.71	518.688	514.239	14.696	14.258	.2084	0.00	20.93	0.000	.0741
2	6.2267	232.71	0.00	232.71	518.688	514.239	14.696	14.258	.2084	0.00	19.79	0.000	.0741
3	6.3835	232.71	0.00	232.71	518.688	514.239	14.696	14.258	.2084	0.00	18.63	0.000	.0741
4	6.5391	232.71	0.00	232.71	518.688	514.239	14.696	14.258	.2084	0.00	17.47	0.000	.0741
5	6.6937	232.71	0.00	232.71	518.688	514.239	14.696	14.258	.2084	0.00	16.30	0.000	.0741
6	6.8472	232.71	0.00	232.71	518.688	514.239	14.696	14.258	.2084	0.00	15.13	0.000	.0741
7	6.9999	232.71	0.00	232.71	518.688	514.239	14.696	14.258	.2084	0.00	13.96	0.000	.0741
8	7.1518	232.71	0.00	232.71	518.688	514.239	14.696	14.258	.2084	0.00	12.78	0.000	.0741
9	7.3030	232.71	0.00	232.71	518.688	514.239	14.696	14.258	.2084	0.00	11.61	0.000	.0741
10	7.4536	232.71	0.00	232.71	518.688	514.239	14.696	14.258	.2084	0.00	10.44	0.000	.0741
11	7.6036	232.71	0.00	232.71	518.688	514.239	14.696	14.258	.2084	0.00	9.28	0.000	.0741
12	7.7532	232.71	0.00	232.71	518.688	514.239	14.696	14.258	.2084	0.00	8.14	0.000	.0741
13	7.9024	232.71	0.00	232.71	518.688	514.239	14.696	14.258	.2084	0.00	7.02	0.000	.0741
14	8.0513	232.71	0.00	232.71	518.688	514.239	14.696	14.258	.2084	0.00	5.92	0.000	.0741
15	8.2000	232.71	0.00	232.71	518.688	514.239	14.696	14.258	.2084	0.00	4.87	0.000	.0741
16	8.3485	232.71	0.00	232.71	518.688	514.239	14.696	14.258	.2084	0.00	3.86	0.000	.0741
17	8.4969	232.71	0.00	232.71	518.688	514.239	14.696	14.258	.2084	0.00	2.91	0.000	.0741
18	8.6452	232.71	0.00	232.71	518.688	514.239	14.696	14.258	.2084	0.00	2.04	0.000	.0741
19	8.7934	232.71	0.00	232.71	518.688	514.239	14.696	14.258	.2084	0.00	1.25	0.000	.0741
20	8.9417	232.71	0.00	232.71	518.688	514.239	14.696	14.258	.2084	0.00	.56	0.000	.0741
21	9.0900	232.71	0.00	232.71	518.688	514.239	14.696	14.258	.2084	0.00	0.00	0.000	.0741

STATION 2 FLOW FIELD DESCRIPTION

STREAM -LINE	RADIUS	VELOCITIES MERID	VELOCITIES TANGEN	VELOCITIES TOTAL	TEMPERATURES TOTAL	TEMPERATURES STATIC	PRESSURES TOTAL	PRESSURES STATIC	MACH NO	ANGLES WHIRL	ANGLES SLOPE	RADIUS OF CURVATURE	SPECIFIC WEIGHT
1	6.3746	250.93	0.00	250.93	518.688	513.514	14.696	14.188	.2249	0.00	20.83	-205.758	.0738
2	6.514[illegible]	252.04	0.00	252.04	518.688	513.469	14.696	14.183	.2259	0.00	19.64	-149.140	.0738
3	6.6532	253.05	0.00	253.06	518.688	513.425	14.696	14.179	.2268	0.00	18.46	-124.752	.0738
4	6.7909	254.01	0.00	254.01	518.688	513.385	14.696	14.175	.2277	0.00	17.28	-110.877	.0738
5	6.9276	254.90	0.00	254.90	518.688	513.349	14.696	14.172	.2285	0.00	16.09	-100.936	.0738
6	7.0635	255.71	0.00	255.71	518.688	513.315	14.696	14.169	.2292	0.00	14.90	-92.290	.0738
7	7.1987	256.44	0.00	256.44	518.688	513.284	14.696	14.166	.2299	0.00	13.71	-83.868	.0738
8	7.3333	257.08	0.00	257.08	518.688	513.259	14.696	14.163	.2305	0.00	12.51	-75.359	.0738
9	7.4673	257.59	0.00	257.59	518.688	513.236	14.696	14.161	.2309	0.00	11.30	-66.897	.0737
10	7.6010	257.97	0.00	257.97	518.688	513.220	14.696	14.159	.2313	0.00	10.09	-58.723	.0737
11	7.7344	258.18	0.00	258.18	518.688	513.211	14.696	14.158	.2315	0.00	8.88	-51.067	.0737
12	7.8676	258.20	0.00	258.20	518.688	513.210	14.696	14.158	.2315	0.00	7.68	-44.081	.0737
13	8.0009	258.00	0.00	258.00	518.688	513.219	14.696	14.159	.2313	0.00	6.48	-37.836	.0737
14	8.1343	257.55	0.00	257.55	518.688	513.239	14.696	14.161	.2309	0.00	5.30	-32.340	.0737
15	8.2681	256.83	0.00	256.83	518.688	513.268	14.696	14.164	.2303	0.0[illegible]	4.14	-27.563	.0738
16	8.4025	255.80	0.00	255.80	518.688	513.312	14.696	14.168	.2293	0.[illegible]	3.00	-23.451	.0738
17	8.5375	254.42	0.00	254.42	518.688	513.369	14.696	14.174	.2281	0.[illegible]	1.91	-19.937	.0738
18	8.6736	252.65	0.00	252.66	518.688	513.443	14.696	14.181	.2265	0.00	.85	-16.955	.0738
19	8.8108	250.48	0.00	250.48	518.688	513.533	14.696	14.190	.2245	0.00	-.14	-14.434	.0739
20	8.9495	247.84	0.00	247.84	518.688	513.641	14.696	14.200	.2221	0.00	-1.07	-12.309	.0739
21	9.0900	244.63	0.00	244.63	518.688	513.769	14.696	14.213	.2193	0.00	-1.91	-10.518	.0739

STATION 3 FLOW FIELD DESCRIPTION

STREAM LINE	RADIUS	VELOCITIES MERID	VELOCITIES TANGEN	VELOCITIES TOTAL	TEMPERATURES TOTAL	TEMPERATURES STATIC	PRESSURES TOTAL	PRESSURES STATIC	MACH NO	ANGLES WHIRL	ANGLES SLOPE	RADIUS OF CURVATURE	SPECIFIC WEIGHT
1	6.6016	271.01	0.00	271.01	518.688	512.653	14.696	14.104	.2431	0.00	20.54	-83.031	.0735
2	6.7270	272.49	0.00	272.49	518.688	512.587	14.696	14.098	.2445	0.00	19.38	-126.728	.0735
3	6.8515	274.05	0.00	274.05	518.688	512.515	14.696	14.091	.2459	0.00	18.23	-236.261	.0735
4	6.9754	275.70	0.00	275.70	518.688	512.442	14.696	14.084	.2474	0.00	17.07	-657.818	.0735
5	7.0984	277.38	0.00	277.38	518.688	512.365	14.696	14.077	.2489	0.00	15.89	11290.788	.0734
6	7.2207	279.05	0.00	279.05	518.688	512.290	14.696	14.069	.2504	0.00	14.69	1812.823	.0734
7	7.3424	280.65	0.00	280.65	518.688	512.216	14.696	14.062	.2519	0.00	13.46	-10503.317	.0734
8	7.4634	282.14	0.00	282.14	518.688	512.147	14.696	14.056	.2532	0.00	12.21	-571.386	.0734
9	7.5839	283.45	0.00	283.46	518.688	512.086	14.696	14.050	.2544	0.00	10.93	-233.067	.0733
10	7.7040	284.55	0.00	284.56	518.688	512.034	14.696	14.045	.2554	0.00	9.63	-131.473	.0733
11	7.8239	285.42	0.00	285.42	518.688	511.994	14.696	14.041	.2562	0.00	8.32	-86.059	.0733
12	7.9436	285.97	0.00	285.97	518.688	511.968	14.696	14.038	.2567	0.00	6.98	-61.244	.0733
13	8.0634	286.13	0.00	286.19	518.688	511.958	14.696	14.037	.2569	0.00	5.63	-45.848	.0733
14	8.1834	286.03	0.00	286.03	518.688	511.966	14.696	14.038	.2568	0.00	4.27	-35.427	.0733
15	8.3039	285.45	0.00	285.45	518.688	511.993	14.696	14.041	.2562	0.00	2.90	-27.979	.0733
16	8.4258	284.38	0.00	284.38	518.688	512.043	14.696	14.046	.2553	0.00	1.51	-22.447	.0733
17	8.5470	282.78	0.00	282.78	518.688	512.110	14.696	14.053	.2530	0.00	.11	-18.229	.0733
18	8.6701	280.57	0.00	280.57	518.688	512.220	14.696	14.063	.2518	0.00	-1.29	-14.942	.0734
19	8.7948	277.68	0.00	277.68	518.688	512.352	14.696	14.075	.2492	0.00	-2.69	-12.348	.0734
20	8.9213	274.04	0.00	274.04	518.688	512.518	14.696	14.091	.2459	0.00	-4.09	-10.297	.0735
21	9.0500	269.58	0.00	269.58	518.688	512.717	14.696	14.111	.2418	0.00	-5.47	-8.690	.0736

STATION 4 FLOW FIELD DESCRIPTION

STREAM LINE	RADIUS	VELOCITIES MERID	VELOCITIES TANGEN	VELOCITIES TOTAL	TEMPERATURES TOTAL	TEMPERATURES STATIC	PRESSURES TOTAL	PRESSURES STATIC	MACH NO	ANGLES WHIRL	ANGLES SLOPE	RADIUS OF CURVATURE	SPECIFIC WEIGHT
1	6.7500	293.08	0.00	293.08	518.688	511.634	14.696	14.006	.2631	0.00	20.32	-388.854	.0732
2	6.8667	295.15	0.00	295.15	518.688	511.530	14.696	13.996	.2651	0.00	19.45	65.587	.0731
3	6.9828	297.81	0.00	297.81	518.688	511.431	14.696	13.984	.2675	0.00	18.47	39.284	.0731
4	7.0980	300.72	0.00	300.72	518.688	511.257	14.696	13.970	.2701	0.00	17.42	32.261	.0730
5	7.2123	303.74	0.00	303.74	518.688	511.107	14.696	13.956	.2729	0.00	16.29	30.828	.0730
6	7.3256	306.73	0.00	306.73	518.688	510.957	14.696	13.941	.2756	0.00	15.09	30.173	.0729
7	7.4381	309.61	0.00	309.61	518.688	510.812	14.696	13.927	.2782	0.00	13.83	32.332	.0729
8	7.5498	312.28	0.00	312.28	518.688	510.675	14.696	13.914	.2807	0.00	12.50	36.793	.0728
9	7.6607	314.67	0.00	314.67	518.688	510.552	14.696	13.903	.2829	0.00	11.13	44.917	.0728
10	7.7711	316.74	0.00	316.74	518.688	510.444	14.696	13.892	.2847	0.00	9.72	59.223	.0727
11	7.8812	318.45	0.00	318.46	518.688	510.355	14.696	13.884	.2863	0.00	8.29	84.734	.0727
12	7.9909	319.82	0.00	319.82	518.688	510.283	14.696	13.877	.2876	0.00	6.83	143.444	.0727
13	8.1007	320.82	0.00	320.82	518.688	510.230	14.696	13.872	.2885	0.00	5.34	500.541	.0727
14	8.2105	321.45	0.00	321.45	518.688	510.198	14.696	13.869	.2890	0.00	3.82	-268.688	.0727
15	8.3205	321.64	0.00	321.64	518.688	510.187	14.696	13.868	.2892	0.00	2.26	-93.364	.0727
16	8.4310	321.34	0.00	321.34	518.688	510.203	14.696	13.869	.2889	0.00	.66	-53.687	.0727
17	8.5423	320.50	0.00	320.50	518.688	510.248	14.696	13.874	.2882	0.00	-.98	-36.972	.0727
18	8.6544	319.04	0.00	319.04	518.688	510.324	14.696	13.881	.2868	0.00	-2.67	-26.878	.0727
19	8.7678	316.83	0.00	316.83	518.688	510.440	14.696	13.892	.2848	0.00	-4.44	-19.687	.0727
20	8.8828	313.64	0.00	313.64	518.688	510.605	14.696	13.908	.2819	0.00	-6.30	-14.242	.0728
21	9.0000	309.16	0.00	309.16	518.688	510.834	14.696	13.938	.2778	0.00	-8.25	-10.317	.0729

BLADE DATA

LOCAT-ION	BLADE-ANGLES SECTION	BLADE-ANGLES LEAN	REL FLOW ANGLE	DEVIATION INCIDENCE	LOSS COEFF	BLADE SPEED	RELATIVE MACH NO	RELATIVE VELOCITY	RELATIVE PRESSURE	RELATIVE TEMPERATURE	PRESSURE RATIO	DELTA T ON T	ISENTROPIC EFFICIENCY	POLYTROPIC EFFICIENCY
1	-62.667	17.205	-70.779	-8.113	0.0000	840.4	.7992	889.99	21.325	576.563	1.000	0.000	1.0000	1.0000
2	-62.580	16.450	-70.953	-8.373	0.0000	854.9	.8122	904.43	21.589	578.584	1.000	0.000	1.0000	1.0000
3	-62.571	15.428	-71.091	-8.520	0.0000	869.4	.8254	918.96	21.858	580.727	1.000	0.000	1.0000	1.0000
4	-62.629	14.131	-71.207	-8.578	0.0000	883.7	.8385	933.47	22.132	582.788	1.000	0.000	1.0000	1.0000
5	-62.686	12.735	-71.311	-8.626	0.0000	897.9	.8515	947.92	22.411	584.967	1.000	0.000	1.0000	1.0000
6	-62.718	11.400	-71.412	-8.694	0.0000	912.0	.8645	962.25	22.695	586.961	1.000	0.000	1.0000	1.0000
7	-62.775	10.254	-71.514	-8.739	0.0000	926.1	.8775	976.44	22.983	589.071	1.000	0.000	1.0000	1.0000
8	-62.885	9.335	-71.622	-8.738	0.0000	940.0	.8902	990.47	23.276	591.197	1.000	0.000	1.0000	1.0000
9	-63.017	8.501	-71.741	-8.724	0.0000	953.8	.9028	1004.34	23.575	593.341	1.000	0.000	1.0000	1.0000
10	-63.145	7.633	-71.873	-8.728	0.0000	967.5	.9152	1018.04	23.679	595.506	1.000	0.000	1.0000	1.0000
11	-63.272	6.803	-72.019	-8.747	0.0000	981.2	.9275	1031.60	24.189	597.593	1.000	0.000	1.0000	1.0000
12	-63.406	6.120	-72.179	-8.773	0.0000	994.9	.9395	1045.02	24.506	599.306	1.000	0.000	1.0000	1.0000
13	-63.542	5.601	-72.354	-8.812	0.0000	1008.5	.9515	1058.34	24.830	602.148	1.000	0.000	1.0000	1.0000
14	-63.667	5.214	-72.544	-8.877	0.0000	1022.2	.9535	1071.56	25.162	604.423	1.000	0.000	1.0000	1.0000
15	-63.775	4.896	-72.751	-8.976	0.0000	1035.9	.9754	1084.70	25.502	606.733	1.000	0.000	1.0000	1.0000
16	-63.872	4.550	-72.979	-9.107	0.0000	1049.7	.9871	1097.76	25.851	609.083	1.000	0.000	1.0000	1.0000
17	-63.966	4.107	-73.230	-9.263	0.0000	1063.5	.9987	1110.76	26.211	611.480	1.000	0.000	1.0000	1.0000
18	-64.075	3.576	-73.506	-9.431	0.0000	1077.5	1.0103	1123.73	26.583	613.328	1.000	0.000	1.0000	1.0000
19	-64.212	2.984	-73.815	-9.603	0.0000	1091.6	1.0219	1136.65	26.967	616.435	1.000	0.000	1.0000	1.0000
20	-64.356	2.383	-74.167	-9.811	0.0000	1105.9	1.0333	1149.54	27.367	619.312	1.000	0.000	1.0000	1.0000
21	-64.476	1.836	-74.575	-10.099	0.0000	1120.5	1.0446	1162.38	27.783	621.570	1.000	0.000	1.0000	1.0000

STATION 5 FLOW FIELD DESCRIPTION

STREAM-LINE	RADIUS	VELOCITIES MERID	VELOCITIES TANGEN	VELOCITIES TOTAL	TEMPERATURES TOTAL	TEMPERATURES STATIC	PRESSURES TOTAL	PRESSURES STATIC	MACH NO	ANGLES WHIRL	ANGLES SLOPE	RADIUS OF CURVATURE	SPECIFIC WEIGHT
1	6.8979	311.01	151.92	346.13	540.121	530.282	16.917	15.859	.3053	26.03	22.32	6.199	.0799
2	7.0094	315.86	150.54	349.90	540.268	530.214	16.932	15.851	.3087	25.48	21.13	8.251	.0799
3	7.1188	320.09	149.27	353.19	540.428	530.175	16.948	15.847	.3116	25.08	19.79	12.162	.0799
4	7.2263	323.81	148.13	356.08	540.580	530.167	16.966	15.845	.3141	24.58	18.32	22.856	.0799
5	7.3322	327.40	147.29	359.01	540.775	530.191	16.987	15.848	.3167	24.22	16.76	158.951	.0799
6	7.4364	331.01	146.87	362.13	541.026	530.256	17.014	15.854	.3194	23.93	15.14	-34.518	.0799
7	7.5392	334.38	146.78	365.17	541.320	530.369	17.047	15.866	.3221	23.70	13.47	-16.387	.0800
8	7.6408	337.28	146.94	367.90	541.650	530.535	17.083	15.883	.3244	23.54	11.76	-11.886	.0800
9	7.7413	339.83	147.39	370.42	542.024	530.756	17.125	15.906	.3266	23.45	10.03	-8.499	.0801
10	7.8411	341.54	149.67	372.89	542.689	531.270	17.171	15.936	.3286	23.66	8.29	-7.069	.0802
11	7.9404	342.85	152.91	375.41	543.520	531.947	17.224	15.978	.3306	24.04	6.56	-6.181	.0802
12	8.0394	344.12	156.36	377.97	544.395	532.564	17.282	16.009	.3327	24.44	4.87	-5.620	.0803
13	8.1382	345.39	159.95	380.63	545.309	533.413	17.346	16.053	.3348	24.85	3.28	-5.289	.0804
14	8.2369	346.68	163.68	383.37	546.259	534.191	17.414	16.099	.3369	25.27	1.56	-5.148	.0806
15	8.3355	348.01	167.49	386.22	547.238	534.990	17.485	16.149	.3392	25.70	-.07	-5.191	.0807
16	8.4341	348.35	173.87	389.33	548.677	536.231	17.559	16.199	.3415	26.53	-1.66	-5.450	.0807
17	8.5332	348.55	180.34	392.44	550.157	537.512	17.633	16.250	.3438	27.36	-3.28	-6.023	.0808
18	8.6327	349.09	185.27	395.20	551.393	538.570	17.704	16.299	.3459	27.96	-4.71	-7.159	.0809
19	8.7326	349.84	188.91	397.58	552.421	539.444	17.768	16.344	.3477	28.37	-6.23	-9.620	.0810
20	8.8330	350.36	192.44	399.73	553.447	540.329	17.824	16.383	.3493	28.78	-7.78	-17.224	.0810
21	8.9340	350.63	196.21	401.80	554.532	541.279	17.870	16.414	.3508	29.23	-9.38	-1665.883	.0811

BLADE DATA

LOCAT -ION	BLADE-ANGLES SECTION	LEAN	REL FLOW ANGLE	DEVIATION INCIDENCE	LOSS COEFF	BLADE SPEED	RELATIVE MACH NO	RELATIVE VELOCITY	RELATIVE PRESSURE	RELATIVE TEMPERATURE	PRESSURE RATIO	DELTA T ON T	ISENTROPIC EFFICIENCY	POLYTROPIC EFFICIENCY
1	-60.252	10.482	-66.251	-6.000	.0043	858.8	.6812	772.27	21.629	579.229	1.151	.041	.9895	.9897
2	-60.376	9.940	-56.375	-6.000	.0044	872.7	.6953	788.20	21.888	581.288	1.152	.042	.9893	.9895
3	-60.525	8.963	-56.525	-6.000	.0043	886.3	.7089	803.54	22.148	583.164	1.153	.042	.9891	.9893
4	-60.691	7.698	-66.691	-6.000	.0043	899.7	.7219	818.35	22.411	585.125	1.154	.042	.9890	.9892
5	-60.846	6.455	-56.846	-6.000	.0042	912.9	.7345	832.64	22.675	587.383	1.156	.043	.9890	.9892
6	-60.978	5.421	-66.978	-6.000	.0042	925.8	.7466	846.39	22.942	589.840	1.158	.043	.9891	.9893
7	-61.108	4.632	-57.107	-6.000	.0041	938.6	.7582	859.57	23.211	590.996	1.160	.044	.9891	.9893
8	-61.251	4.087	-57.250	-6.000	.0040	951.3	.7592	872.20	23.483	592.354	1.162	.044	.9892	.9894
9	-61.401	3.671	-57.401	-6.000	.0040	963.8	.7797	884.31	23.758	594.918	1.165	.045	.9894	.9896
10	-61.549	3.250	-57.549	-6.000	.0077	976.2	.7882	894.34	23.999	596.393	1.165	.046	.9795	.9800
11	-61.693	2.790	-57.693	-6.000	.0129	988.6	.7955	903.27	24.226	598.883	1.172	.048	.9656	.9666
12	-61.832	2.356	-57.831	-6.000	.0179	1000.9	.8027	911.97	24.457	600.593	1.176	.050	.9532	.9543
13	-61.963	2.018	-57.963	-6.000	.0225	1013.2	.8095	920.52	24.694	602.323	1.180	.051	.9418	.9432
14	-62.087	1.760	-58.087	-6.000	.0271	1025.5	.8164	928.94	24.936	604.375	1.185	.053	.9313	.9329
15	-62.204	1.686	-58.205	-6.000	.0314	1037.8	.8232	937.29	25.183	607.349	1.190	.055	.9216	.9235
16	-62.318	1.708	-58.319	-6.000	.0415	1050.1	.8271	942.89	25.364	609.150	1.195	.058	.8992	.9017
17	-62.438	1.779	-68.438	-6.000	.0517	1062.4	.8318	948.43	25.544	611.284	1.200	.061	.8777	.8808
18	-62.573	1.834	-68.573	-6.000	.0588	1074.8	.8364	955.57	25.764	613.452	1.205	.063	.8634	.8670
19	-62.722	1.831	-58.722	-6.000	.0636	1087.2	.8432	964.03	26.015	615.554	1.209	.065	.8538	.8577
20	-62.885	1.739	-58.885	-6.000	.0692	1099.7	.8499	972.57	26.261	617.391	1.213	.067	.8428	.8478
21	-63.056	1.554	-69.056	-6.000	.0763	1112.3	.8565	988.89	26.490	620.168	1.216	.069	.8286	.8333

STATION 5 INTEGRATED PERFORMANCE PRESSURE RATIO = 1.179 ISEN. EFF.= .927 PO.Y. EFF.= .929 DELTA T ON T = .052

STATION 6 FLOW FIELD DESCRIPTION

STREAM -LINE	RADIUS	VELOCITIES MERID	VELOCITIES TANGEN	VELOCITIES TOTAL	TEMPERATURES TOTAL	TEMPERATURES STATIC	PRESSURES TOTAL	PRESSURES STATIC	MACH NO	ANGLES WHIRL	ANGLES SLOPE	RADIUS OF CURVATURE	SPECIFIC WEIGHT
1	7.0784	363.47	236.46	433.62	552.913	537.477	18.340	16.683	.3799	33.05	27.37	4.382	.0826
2	7.1760	370.95	230.85	436.91	552.563	536.891	18.298	16.539	.3830	31.98	25.03	5.328	.0823
3	7.2706	377.47	225.89	439.89	552.271	536.384	18.263	16.483	.3858	30.90	22.66	6.710	.0821
4	7.3628	382.82	221.23	442.15	551.996	535.946	18.230	16.435	.3880	30.02	20.27	8.639	.0820
5	7.4532	387.33	216.94	443.95	551.752	535.579	18.201	16.394	.3897	29.25	17.89	11.531	.0818
6	7.5421	391.45	213.22	445.78	551.572	535.257	18.180	16.360	.3914	28.57	15.53	16.349	.0817
7	7.6297	395.43	210.18	447.87	551.480	535.011	18.169	16.334	.3933	27.99	13.28	25.669	.0816
8	7.7163	399.28	207.72	450.08	551.464	534.832	18.167	16.314	.3953	27.49	10.93	49.313	.0815
9	7.8022	402.68	205.66	452.17	551.504	534.717	18.172	16.302	.3972	27.06	8.71	285.327	.0815
10	7.8876	404.21	206.99	454.12	552.073	535.141	18.181	16.296	.3988	27.12	6.55	-127.282	.0814
11	7.9732	404.86	210.03	456.10	552.932	535.852	18.196	16.297	.4002	27.42	4.48	-54.748	.0813
12	8.0591	405.47	213.35	458.17	553.846	536.612	18.218	16.303	.4018	27.75	2.51	-37.784	.0812
13	8.1454	406.03	216.84	460.31	554.803	537.403	18.247	16.315	.4033	28.10	.65	-30.448	.0811
14	8.2322	406.57	220.52	462.52	555.808	538.246	18.280	16.330	.4050	28.48	-1.18	-26.712	.0811
15	8.3196	407.13	224.43	464.89	556.867	539.125	18.320	16.350	.4067	28.87	-2.74	-24.736	.0811
16	8.4079	405.03	233.02	467.67	558.884	540.930	18.364	16.373	.4085	30.08	-4.23	-24.394	.0809
17	8.4975	402.52	243.79	470.59	561.044	542.867	18.413	16.400	.4103	31.20	-5.54	-26.418	.0807
18	8.5885	408.98	251.18	473.11	562.780	544.409	18.462	16.430	.4119	32.06	-6.67	-31.954	.0807
19	8.6805	400.08	256.36	475.16	564.184	545.654	18.511	16.461	.4132	32.65	-7.68	-44.337	.0806
20	8.7736	398.57	262.24	477.11	565.726	547.045	18.558	16.492	.4144	33.34	-8.59	-82.241	.0806
21	8.8679	396.85	269.61	479.13	567.567	548.727	18.604	16.523	.4155	34.24	-9.38	1665.883	.0805

BLADE DATA

LOCAT -ION	BLADE-ANGLES --SECTION	LEAN	REL FLOW ANGLE	DEVIATION INCIDENCE	LOSS COEFF	BLADE SPEED	RELATIVE MACH NO	RELATIVE VELOCITY	RELATIVE PRESSURE	RELATIVE TEMPERATURE	PRESSURE RATIO	DELTA T ON T	ISENTROPIC EFFICIENCY	POLYTROPIC EFFICIENCY
1	-54.590	3.782	-50.591	-6.000	.0088	881.3	.6486	740.20	22.021	582.436	1.248	.066	.9865	.9870
2	-54.757	3.241	-50.757	-6.000	.0088	893.4	.6557	759.33	22.255	584.203	1.245	.065	.9861	.9865
3	-54.941	2.451	-50.941	-6.000	.0087	905.2	.6816	777.14	22.487	585.940	1.243	.065	.9857	.9862
4	-55.169	1.482	-51.169	-6.000	.0085	916.7	.6966	793.85	22.719	587.556	1.240	.064	.9854	.9859
5	-55.419	.541	-51.420	-6.000	.0085	927.9	.7107	809.65	22.951	589.357	1.239	.064	.9852	.9856
6	-55.658	-.175	-51.658	-6.001	.0083	939.0	.7240	824.63	23.183	591.050	1.237	.063	.9850	.9855
7	-55.868	-.601	-51.869	-6.001	.0082	949.9	.7367	838.81	23.417	592.739	1.236	.063	.9849	.9853
8	-56.064	-.804	-52.065	-6.001	.0080	960.7	.7436	852.29	23.652	594.428	1.236	.063	.9848	.9853
9	-56.259	-.851	-52.260	-6.001	.0079	971.4	.7600	865.12	23.890	596.120	1.237	.063	.9840	.9852
10	-56.456	-.815	-52.456	-6.001	.0153	982.0	.7675	874.11	24.055	597.523	1.237	.064	.9703	.9712
11	-56.647	-.775	-52.647	-6.001	.0258	992.7	.7732	881.16	24.188	599.347	1.238	.066	.9490	.9513
12	-56.831	-.799	-52.832	-6.000	.0358	1003.4	.7787	887.99	24.326	601.296	1.240	.068	.9306	.9327
13	-57.011	-.845	-53.011	-6.000	.0452	1014.1	.7840	894.71	24.469	603.072	1.242	.070	.9127	.9158
14	-57.186	-.797	-53.186	-6.000	.0541	1024.9	.7892	901.31	24.617	604.577	1.244	.072	.8958	.8989
15	-57.353	-.546	-53.353	-6.000	.0625	1035.8	.7942	907.73	24.768	606.712	1.247	.074	.8798	.8835
16	-57.517	-.107	-53.517	-6.000	.0831	1046.8	.7933	908.28	24.782	608.387	1.250	.077	.8458	.8498
17	-57.692	.451	-53.692	-6.000	.1036	1058.0	.7919	908.22	24.787	610.312	1.253	.082	.8110	.8177
18	-57.891	1.048	-53.891	-6.001	.1175	1069.3	.7933	911.15	24.867	612.485	1.256	.085	.7894	.7961
19	-58.111	1.609	-54.112	-6.001	.1275	1080.7	.7963	916.33	25.002	614.302	1.260	.088	.7741	.7813
20	-58.351	2.060	-54.352	-6.001	.1385	1092.3	.7995	920.81	25.121	616.564	1.263	.091	.7572	.7651
21	-58.608	2.366	-54.608	-6.000	.1525	1104.1	.8011	923.68	25.200	618.675	1.266	.094	.7367	.7453

STATION 6 INTEGRATED PERFORMANCE PRESSURE RATIO = 1.246 ISEN. EFF.= .893 POLY. EFF.= .896 DELTA T ON T = .072

STATION 7 FLOW FIELD DESCRIPTION

STREAM -LINE	RADIUS	VELOCITIES MERID	TANGEN	TOTAL	TEMPERATURES TOTAL	STATIC	PRESSURES TOTAL	STATIC	MACH NO	ANGLES WHIRL	SLOPE	RADIUS OF CURVATURE	SPECIFIC WEIGHT
1	7.3120	452.69	386.01	594.92	576.381	547.340	21.195	17.673	.5166	40.45	26.61	-3.372	.0863
2	7.3829	454.58	383.32	594.56	576.535	547.538	21.213	17.693	.5162	40.14	23.77	-3.394	.0864
3	7.4527	456.11	381.48	594.62	576.802	547.791	21.246	17.721	.5161	39.91	21.04	-3.477	.0865
4	7.5218	457.21	379.92	594.46	577.101	548.105	21.284	17.756	.5158	39.72	18.40	-3.622	.0866
5	7.5904	457.63	378.29	593.74	577.379	548.454	21.319	17.795	.5150	39.58	15.86	-3.830	.0867
6	7.6587	457.61	376.64	592.67	577.648	548.828	21.354	17.837	.5139	39.46	13.41	-4.095	.0869
7	7.7269	457.40	375.14	591.56	577.938	549.226	21.390	17.882	.5128	39.36	11.04	-4.407	.0870
8	7.7953	457.27	373.95	590.71	578.273	549.544	21.433	17.938	.5119	39.28	8.75	-4.757	.0872
9	7.8639	457.34	373.15	590.26	578.667	550.082	21.484	17.980	.5113	39.21	6.53	-5.144	.0874
10	7.9329	454.12	377.39	590.47	579.880	551.275	21.542	18.032	.5109	39.73	4.40	-5.568	.0874
11	8.0031	449.45	384.22	591.29	581.536	552.853	21.609	18.088	.5109	40.53	2.37	-6.019	.0874
12	8.0745	444.92	391.22	592.46	583.251	554.457	21.683	18.147	.5112	41.33	.44	-6.489	.0875
13	8.1473	440.53	398.29	593.89	585.009	556.075	21.764	18.289	.5117	42.12	-1.37	-6.962	.0875
14	8.2215	436.27	405.55	595.66	586.830	557.725	21.852	18.273	.5124	42.91	-3.08	-7.427	.0876
15	8.2972	432.24	413.11	597.91	588.737	559.415	21.949	18.339	.5136	43.70	-4.66	-7.898	.0876
16	8.3749	421.97	430.45	602.78	592.356	562.559	22.073	18.409	.5163	45.57	-6.08	-8.406	.0875
17	8.4557	411.07	449.39	609.04	596.334	565.919	22.220	18.483	.5202	47.55	-7.24	-9.178	.0873
18	8.5391	403.42	463.96	614.82	599.636	568.645	22.368	18.559	.5238	48.99	-8.13	-10.612	.0872
19	8.6247	398.29	474.92	619.83	602.376	570.881	22.511	18.635	.5271	50.02	-8.79	-13.757	.0872
20	8.7122	392.31	457.19	625.51	605.403	573.332	22.659	18.709	.5308	51.16	-9.22	-23.477	.0872
21	8.8019	384.30	502.35	632.48	609.015	576.229	22.815	18.778	.5354	52.58	-9.37	*956875.344	.0871

BLADE DATA

LOCATION	BLADE-ANGLES SECTION	LEAN	REL FLOW ANGLE	DEVIATION INCIDENCE	LOSS COEFF	BLADE SPEED	RELATIVE MACH NO	RELATIVE VELOCITY	RELATIVE PRESSURE	RELATIVE TEMPERATURE	PRESSURE RATIO	DELTA T ON T	ISENTROPIC EFFICIENCY	POLYTROPIC EFFICIENCY
1	-42.577	-5.962	-49.195	-6.616	.0135	910.4	.6015	692.72	22.561	586.708	1.442	.111	.9876	.9882
2	-43.096	-5.442	-49.697	-6.601	.0134	919.2	.6100	702.65	22.739	588.032	1.443	.112	.9873	.9880
3	-43.562	-5.600	-50.146	-6.583	.0132	927.9	.6179	711.75	22.917	589.340	1.446	.112	.9872	.9878
4	-44.030	-5.474	-50.595	-6.567	.0130	936.5	.6250	720.27	23.096	590.562	1.448	.113	.9871	.9878
5	-44.527	-5.103	-51.079	-6.552	.0128	945.0	.6319	728.42	23.277	591.970	1.451	.113	.9871	.9877
6	-45.038	-4.808	-51.577	-6.539	.0125	953.5	.6385	736.34	23.460	593.302	1.453	.114	.9870	.9877
7	-45.538	-4.345	-52.058	-6.530	.0123	962.0	.6450	744.06	23.645	594.536	1.456	.114	.9870	.9877
8	-45.007	-3.790	-52.530	-6.523	.0120	970.5	.6513	751.66	23.834	595.384	1.458	.115	.9870	.9877
9	-46.436	-3.174	[illegible].954	-6.519	.0118	979.1	.6575	759.14	24.026	597.347	1.462	.116	.9870	.9877
10	-45.828	-2.559	[illegible].346	-6.517	.0228	987.7	.6582	760.69	24.109	598.733	1.466	.118	.9746	.9760
11	-47.196	-2.010	-5[illegible].714	-6.519	.0386	996.4	.6562	759.45	24.143	600.153	1.470	.121	.9570	.9593
12	-47.552	-1.582	-54.075	-6.523	.0[illegible]35	1005.3	.6543	758.31	24.182	601.512	1.475	.124	.9484	.9435
13	-47.904	-1.233	-54.432	-6.529	.0577	1014.4	.6525	757.36	24.220	603.111	1.481	.128	.9246	.9287
14	-48.245	-.879	-54.782	-6.537	.0812	1023.6	.6508	756.51	24.278	604.654	1.487	.131	.9096	.9145
15	-48.563	-.432	-55.113	-6.547	.0942	1033.0	.6491	755.71	24.333	606.240	1.494	.135	.8953	.9018
16	-48.865	.143	-55.425	-6.560	.1247	1042.7	.6369	743.57	24.179	607.806	1.502	.142	.8640	.8716
17	-49.157	.811	-55.733	-6.576	.1555	1052.7	.6235	730.07	24.011	609.511	1.512	.150	.8330	.8432
18	-43.452	1.517	-56.048	-6.595	.1770	1063.1	.6154	722.33	23.953	611.412	1.522	.156	.8134	.8241
19	-49.752	2.180	-56.373	-6.621	.1916	1073.8	.6116	719.22	23.978	613.276	1.532	.161	.7994	.8110
20	-50.057	2.740	-56.711	-6.654	.2061	1084.7	.6065	714.77	23.977	615.201	1.542	.167	.7840	.7957
21	-50.376	3.083	-57.077	-6.700	.2283	1095.8	.5985	707.06	23.913	617.195	1.552	.174	.7653	.7793

STATION 7 INTEGRATED PERFORMANCE PRESSURE RATIO = 1.483 ISEN. EFF.= .904 POLY. EFF.= .909 DELTA T ON T = .131

STATION 8 FLOW FIELD DESCRIPTION

STREAM-LINE	RADIUS	VELOCITIES MERID	TANGEN	TOTAL	TEMPERATURES TOTAL	STATIC	PRESSURES TOTAL	STATIC	MACH NO	ANGLES WHIRL	SLOPE	RADIUS OF CURVATURE	SPECIFIC WEIGHT
1	7.4792	567.18	531.68	777.42	599.937	550.378	24.371	17.995	.6732	43.15	16.56	-1.883	.0874
2	7.5283	559.06	530.45	770.67	600.202	551.573	24.417	18.132	.6666	[illegible].50	-14.64	-2.156	.0879
3	7.5783	552.31	529.27	764.97	600.640	552.651	24.466	18.255	.6611	43.78	12.81	-2.493	.0883
4	7.6290	546.00	528.12	760.20	601.009	553.617	24.517	18.365	.656[illegible]	44.00	11.06	-2.916	.0887
5	7.6806	542.40	526.94	756.22	601.378	554.483	24.568	18.465	.6524	44.17	[illegible]	-3.459	.0890
6	7.7328	538.95	525.64	752.84	601.736	555.260	24.619	18.556	.6491	44.28	[illegible].76	-4.185	.0893
7	7.7858	536.23	524.15	749.85	602.067	555.960	24.665	18.637	.6461	44.35	[illegible] 16	-5.289	.0896
8	7.8394	534.11	522.33	747.06	602.358	556.585	24.784	18.718	.6433	44.36	4.6[illegible]	-6.764	.0898
9	7.8938	532.52	520.14	744.40	602.577	557.139	24.735	18.774	.6407	44.33	3.0[illegible]	-9.383	.0901
10	7.9492	525.81	523.25	741.23	603.660	558.613	24.739	18.832	.6371	44.90	[illegible]	-14.493	.0901
11	8.0063	514.85	529.05	738.21	605.225	560.544	24.734	13.885	.6335	45.78	.85	-27.542	.0900
12	8.0653	505.11	534.95	735.73	606.832	562.454	24.733	18.934	.6303	46.64	-1.42	-111.877	.0900
13	8.1263	495.76	540.92	733.74	608.487	564.352	24.739	18.982	.6275	47.49	-2.86	74.883	.0899
14	8.1892	486.53	547.82	732.88	610.284	566.260	24.751	19.028	.6251	48.35	-4.26	31.868	.0898
15	8.2543	477.23	553.27	730.65	[illegible]	568.720	24.766	19.076	.6228	49.22	-5.60	22.498	.0897
16	8.3227	454.06	572.60	[illegible]1.28	616.[illegible]	[illegible]	[illegible].801	19.127	.6211	51.54	-6.87	19.928	.0393
17	8.3959	429.94	594.92	734.01	520.785	[illegible]	24.879	19.188	.6211	54.15	-7.96	21.484	.0898
18	8.4742	418.68	611.98	736.96	624.599	[illegible]	24.983	19.268	.6217	56.14	-8.80	28.147	.0.87
19	8.5568	395.97	624.84	739.74	[illegible]	583.049	25.106	19.342	.6225	57.64	-9.48	50.458	.0887
20	8.6437	379.11	641.11	744.81	[illegible]	586.410	25.276	19.434	.6250	59.40	-9.68	270.057	.0886
21	8.7359	356.91	663.32	753.25	530.999	590.542	25.507	19.535	.6299	61.72	-9.37	*816564.766	.0884

BLADE DATA

LOCAT-ION	BLADE-ANGLES SECTION	LEAN	REL FLOW ANGLE	DEVIATION INCIDENCE	LOSS COEFF	BLADE SPEED	RELATIVE MACH NO	RELATIVE VELOCITY	RELATIVE PRESSURE	RELATIVE TEMPERATURE	PRESSURE RATIO	DELTA T ON T	ISENTROPIC EFFICIENCY	POLYTROPIC EFFICIENCY
1	-25.429	-6.276	-35.159	-9.729	.0180	931.2	.6008	693.75	22.959	589.850	1.658	.157	.9888	.9888
2	-25.524	-5.883	-36.044	-9.520	.0178	937.3	.5981	691.43	23.085	590.787	1.661	.157	.9878	.9887
3	-27.552	-5.353	-35.870	-9.318	.0175	943.5	.5965	690.39	23.214	591.746	1.665	.158	.9876	.9885
4	-28.512	-4.707	-37.640	-9.128	.0173	949.8	.5962	690.53	23.348	592.726	1.668	.159	.9875	.9884
5	-29.406	-3.979	-38.361	-8.955	.0169	956.2	.5968	691.74	23.486	593.728	1.672	.159	.9874	.9883
6	-30.241	-3.208	-39.043	-8.803	.0165	962.7	.5983	693.92	23.627	594.751	1.675	.160	.9874	.9863
7	-31.023	-2.436	-39.700	-8.677	.0163	969.3	.6005	696.94	23.772	595.795	1.678	.161	.9873	.9882
8	-31.763	-1.700	-40.345	-8.582	.0161	976.0	.6035	700.79	23.921	596.860	1.681	.161	.9872	.9881
9	-32.458	-1.015	-40.984	-8.525	.0157	982.8	.6072	705.42	24.074	597.947	1.683	.162	.9872	.9881
10	-33.108	-.387	-41.619	-8.511	.0304	989.7	.6037	702.28	24.081	599.062	1.683	.164	.9747	.9765
11	-33.714	.176	-42.256	-8.542	.0514	996.8	.5969	695.60	24.021	600.219	1.683	.167	.9567	.9598
12	-34.270	.660	-42.889	-8.618	.0714	1004.1	.5906	689.40	23.966	601.423	1.683	.170	.9392	.9435
13	-34.780	1.067	-43.521	-8.741	.0903	1011.7	.5847	683.70	23.917	602.576	1.683	.173	.9224	.9278
14	-35.254	1.414	-44.164	-8.910	.1083	1019.5	.5791	678.24	23.873	603.980	1.684	.176	.9059	.9125
15	-35.703	1.726	-44.830	-9.127	.1258	1027.7	.5736	672.91	23.833	605.340	1.685	.180	.8898	.8975
16	-35.149	2.033	-45.544	-9.395	.1665	1036.2	.5517	649.46	23.513	606.778	1.688	.186	.8551	.8653
17	-35.603	2.367	-46.331	-9.728	.2075	1045.3	.5269	622.65	23.175	608.333	1.693	.197	.8211	.8338
18	-37.047	2.631	-47.178	-10.131	.2364	1055.1	.5095	604.08	22.987	610.110	1.700	.204	.7977	.8121
19	-37.443	2.982	-48.047	-10.604	.2559	1065.3	.4984	592.31	22.913	611.796	1.708	.211	.7814	.7971
20	-37.779	3.211	-48.930	-11.151	.2778	1076.1	.4842	577.04	22.808	613.592	1.720	.218	.7642	.7813
21	-39.132	3.347	-49.931	-11.799	.3053	1087.6	.4637	554.46	22.629	615.726	1.736	.228	.7440	.7629

STATION 8 INTEGRATED PERFORMANCE PRESSURE RATIO = 1.686 ISEN. EFF.= .909 POLY. EFF.= .907 DELTA T ON T = .178

STATION 9 FLOW FIELD DESCRIPTION

STREAM-LINE	RADIUS	VELOCITIES MERID	VELOCITIES TANGEN	VELOCITIES TOTAL	TEMPERATURES TOTAL	TEMPERATURES STATIC	PRESSURES TOTAL	PRESSURES STATIC	MACH NO	ANGLES WHIRL	ANGLES SLOPE	RADIUS OF CURVATURE	SPECIFIC WEIGHT
1	7.5499	580.95	652.14	873.39	519.251	556.723	27.213	18.712	.7520	48.30	8.54	-5.825	.0898
2	7.5918	576.93	647.91	867.58	519.153	557.454	27.194	18.796	.7465	48.31	7.94	-8.363	.0901
3	7.6346	574.25	643.67	862.60	519.058	558.067	27.175	18.855	.7418	48.26	7.29	-13.121	.0904
4	7.6782	572.59	639.42	858.32	518.966	558.575	27.157	18.934	.7378	48.16	6.61	-24.927	.0905
5	7.7226	571.82	635.16	854.64	518.873	559.003	27.140	18.973	.7344	48.00	5.91	-111.282	.0907
6	7.7676	571.84	630.88	851.48	518.780	559.352	27.124	19.013	.7314	47.81	5.18	53.196	.0908
7	7.8134	572.23	626.16	848.25	518.616	559.638	27.096	19.045	.7285	47.58	4.43	22.476	.0910
8	7.8597	573.17	621.28	845.29	518.425	559.859	27.064	19.070	.7258	47.31	3.66	14.521	.0910
9	7.9066	574.74	616.39	842.78	518.232	560.013	27.033	19.087	.7235	47.09	2.88	10.792	.0911
10	7.9545	569.32	620.12	841.83	519.438	561.352	27.007	19.098	.7219	47.45	2.07	8.595	.0909
11	8.0037	560.51	627.98	841.74	521.342	563.274	26.983	19.104	.7206	48.25	1.23	7.145	.0907
12	8.0546	551.83	635.76	841.84	523.271	565.185	26.959	19.107	.7195	49.04	.36	6.117	.0904
13	8.1073	541.92	640.98	839.37	524.817	567.084	26.875	19.105	.7161	49.79	-.54	5.360	.0900
14	8.1620	531.72	645.75	836.49	526.323	568.998	26.779	19.100	.7125	50.53	-1.48	4.789	.0897
15	8.2187	521.43	650.48	833.67	527.862	570.918	26.681	19.091	.7089	51.28	-2.44	4.342	.0894
16	8.2786	493.04	673.05	834.32	532.463	575.442	26.617	19.085	.7067	53.78	-3.45	4.007	.0886
17	8.3439	458.25	697.45	834.54	537.504	580.465	26.552	19.097	.7038	56.69	-4.51	3.826	.0879
18	8.4152	430.32	714.23	833.85	541.392	584.459	26.501	19.102	.7009	58.93	-5.60	3.848	.0874
19	8.4923	408.47	725.01	832.16	544.376	587.680	26.462	19.138	.6975	60.60	-6.70	4.142	.0870
20	8.5758	378.80	737.57	829.15	547.801	591.523	26.417	19.175	.6928	62.82	-7.80	5.199	.0867
21	8.6699	330.97	754.09	823.52	552.128	596.525	26.361	19.267	.6852	66.30	-8.95	20.749	.0863

BLADE DATA

LOCAT-ION	BLADE-ANGLES SECTION	LEAN	REL FLOW ANGLE	DEVIATION INCIDENCE	LOSS COEFF	BLADE SPEED	RELATIVE MACH NO	RELATIVE VELOCITY	RELATIVE PRESSURE	RELATIVE TEMPERATURE	PRESSURE RATIO	DELTA T ON T	ISENTROPIC EFFICIENCY	POLYTROPIC EFFICIENCY
1	-11.816	2.399	-26.356	-14.539	.0221	940.0	.5583	640.35	23.115	591.200	1.852	.194	.9878	.9888
2	-12.871	2.627	-27.259	-14.389	.0219	945.2	.5585	647.07	23.222	592.006	1.850	.194	.9875	.9885
3	-13.935	2.895	-28.118	-14.182	.0217	950.5	.5600	651.10	23.333	592.534	1.849	.194	.9872	.9883
4	-14.990	3.130	-28.934	-13.944	.0214	955.9	.5624	654.26	23.448	593.583	1.848	.193	.9870	.9881
5	-15.015	3.495	-29.711	-13.697	.0210	961.5	.5657	658.38	23.567	594.551	1.847	.193	.9868	.9879
6	-15.988	3.791	-30.452	-13.464	.0205	967.1	.5699	663.35	23.689	595.437	1.846	.193	.9867	.9878
7	-17.889	4.060	-31.204	-13.315	.0203	972.8	.5746	669.02	23.813	596.342	1.844	.193	.9865	.9876
8	-19.705	4.288	-31.936	-13.230	.0199	978.5	.5799	675.39	23.941	597.264	1.842	.192	.9863	.9875
9	-19.444	4.476	-32.630	-13.186	.0195	984.4	.5859	682.46	24.073	598.204	1.839	.192	.9862	.9873
10	-20.119	4.629	-33.035	-12.916	.0379	990.3	.5823	679.11	24.021	599.168	1.838	.194	.9727	.9749
11	-20.744	4.752	-33.322	-12.578	.0642	996.5	.5742	670.79	23.881	600.166	1.836	.198	.9531	.9569
12	-21.331	4.848	-33.627	-12.297	.0892	1002.8	.5664	662.80	23.745	601.204	1.834	.202	.9340	.9394
13	-21.888	4.918	-34.207	-12.319	.1128	1009.4	.5591	655.28	23.614	602.286	1.829	.205	.9152	.9221
14	-22.414	4.956	-34.864	-12.449	.1354	1016.2	.5520	648.03	23.485	603.415	1.822	.208	.8965	.9049
15	-22.906	4.954	-35.560	-12.654	.1573	1023.2	.5450	640.96	23.357	604.594	1.815	.210	.8780	.8877
16	-23.364	4.899	-35.957	-12.593	.2083	1030.7	.5159	609.10	22.876	605.550	1.811	.219	.8388	.8516
17	-23.795	4.769	-36.682	-12.887	.2599	1038.8	.4819	571.45	22.368	607.227	1.807	.229	.7995	.8153
18	-24.189	4.554	-37.774	-13.565	.2957	1047.7	.4576	544.41	22.044	608.745	1.803	.237	.7714	.7893
19	-24.526	4.271	-39.128	-14.602	.3201	1057.3	.4414	526.56	21.863	610.398	1.801	.242	.7510	.7785
20	-24.788	3.948	-41.072	-16.283	.3474	1067.7	.4198	502.47	21.645	612.207	1.798	.249	.7287	.7499
21	-24.964	3.617	-44.507	-19.543	.3816	1079.4	.3961	464.09	21.349	614.268	1.794	.257	.7022	.7254

STATION 9 INTEGRATED PERFORMANCE PRESSURE RATIO = 1.827 ISEN. EFF.= .898 PO.Y. EFF.= .899 DELTA T ON T = .216

STATION 10 FLOW FIELD DESCRIPTION

STREAM-LINE	RADIUS	VELOCITIES MERID	TANGEN	TOTAL	TEMPERATURES TOTAL	STATIC	PRESSURES TOTAL	STATIC	MACH NO	ANGLES WHIRL	SLOPE	RADIUS OF CURVATURE	SPECIFIC WEIGHT
1	7.5746	576.64	650.01	868.93	519.251	557.360	27.213	18.788	.7478	48.42	7.82	9.349	.0901
2	7.6194	581.09	645.56	868.57	519.153	557.313	27.194	18.779	.7475	48.01	7.66	10.387	.0901
3	7.6645	586.40	641.16	868.88	519.058	557.175	27.175	18.760	.7478	47.55	7.38	11.828	.0900
4	7.7095	592.02	636.82	869.50	518.966	556.993	27.157	18.736	.7485	47.09	7.02	13.190	.0899
5	7.7544	597.58	632.55	870.18	518.873	556.803	27.140	18.711	.7492	46.63	6.61	14.188	.0898
6	7.7991	602.81	628.34	870.74	518.780	556.630	27.124	18.690	.7498	46.19	6.19	14.743	.0897
7	7.8437	607.24	623.74	870.52	518.616	556.497	27.096	18.672	.7497	45.77	5.74	14.887	.0897
8	7.8883	611.10	619.04	869.85	518.425	556.401	27.064	18.659	.7492	45.37	5.30	14.622	.0896
9	7.9327	614.55	614.37	868.99	518.232	556.331	27.033	18.650	.7485	44.99	4.85	14.032	.0895
10	7.9776	618.79	618.32	869.13	519.438	557.520	27.007	18.644	.7478	45.35	4.41	13.226	.0894
11	8.0235	603.21	626.43	859.64	521.342	559.355	26.933	18.641	.7470	46.08	3.94	12.297	.0891
12	8.0706	595.12	634.50	869.92	523.271	561.250	26.959	18.643	.7460	46.83	3.45	11.341	.0888
13	8.1189	584.97	640.77	867.11	524.817	563.201	26.875	18.649	.7423	47.58	2.92	10.424	.0885
14	8.1688	573.66	645.21	863.35	526.323	565.244	26.779	18.661	.7378	48.36	2.35	9.585	.0882
15	8.2203	561.14	650.35	858.97	527.862	567.405	26.681	18.681	.7327	49.21	1.72	8.843	.0880
16	8.2745	538.69	673.38	857.36	532.463	572.245	26.617	18.714	.7282	51.76	.97	8.174	.0874
17	8.3335	492.82	698.32	854.70	537.504	577.573	26.552	18.766	.7226	54.79	.04	7.562	.0868
18	8.3982	459.54	715.67	850.51	541.392	582.158	26.501	18.838	.7163	57.30	-1.13	6.998	.0865
19	8.4692	430.63	726.97	844.35	544.376	585.922	26.462	18.929	.7093	59.36	-2.55	6.346	.0863
20	8.5484	394.40	739.93	838.48	547.801	590.249	26.417	19.034	.7013	61.94	-4.21	5.273	.0862
21	8.6399	346.50	756.70	832.26	552.128	595.433	26.361	19.132	.6931	65.40	-6.18	3.053	.0859

STATION 11 FLOW FIELD DESCRIPTION

STREAM -LINE	RADIUS	VELOCITIES MERID	VELOCITIES TANGEN	VELOCITIES TOTAL	TEMPERATURES TOTAL	TEMPERATURES STATIC	PRESSURES TOTAL	PRESSURES STATIC	MACH NO	ANGLES WHIRL	ANGLES SLOPE	RADIUS OF CURVATURE	SPECIFIC WEIGHT
1	7.6199	616.88	646.15	893.34	619.251	553.830	27.213	18.373	.7712	46.33	9.06	26.367	.0887
2	7.6727	642.61	641.08	907.71	619.153	551.608	27.194	18.112	.7852	44.93	8.63	86.034	.0878
3	7.7229	664.88	636.31	920.30	619.058	549.623	27.175	17.881	.7975	43.74	8.11	-178.141	.0870
4	7.7704	682.40	631.84	930.00	618.966	548.058	27.157	17.701	.8070	42.80	7.58	-56.880	.0863
5	7.8157	695.49	627.59	936.79	618.873	546.924	27.140	17.571	.8138	42.06	7.07	-39.327	.0859
6	7.8597	705.10	623.50	941.23	618.780	546.145	27.124	17.482	.8182	41.49	6.59	-33.834	.0856
7	7.9027	711.80	619.09	943.36	618.616	545.652	27.096	17.425	.8204	41.02	6.16	-33.434	.0854
8	7.9451	716.35	614.60	943.90	618.425	545.377	27.064	17.392	.8211	40.63	5.80	-37.420	.0852
9	7.9872	719.42	610.18	943.34	618.232	545.270	27.033	17.379	.8207	40.30	5.50	-48.577	.0852
10	8.0293	715.71	614.35	943.22	619.438	546.497	27.007	17.380	.8197	40.64	5.24	-79.670	.0850
11	8.0718	708.25	622.69	943.07	621.342	548.431	26.983	17.393	.8181	41.32	4.99	-274.973	.0848
12	8.1148	699.73	631.05	942.30	623.271	550.485	26.959	17.416	.8159	42.04	4.74	164.785	.0846
13	8.1586	689.01	636.96	938.32	624.817	552.649	26.875	17.449	.8109	42.75	4.46	59.396	.0844
14	8.2033	676.75	642.50	933.16	626.323	554.952	26.779	17.494	.8048	43.51	4.15	34.584	.0843
15	8.2490	663.00	648.09	927.14	627.862	557.414	26.681	17.551	.7978	44.35	3.79	23.597	.0842
16	8.2966	633.83	671.59	923.46	632.463	562.588	26.617	17.627	.7910	46.66	3.29	18.126	.0837
17	8.3474	596.73	697.16	917.67	637.504	568.528	26.552	17.741	.7828	49.44	2.53	15.520	.0834
18	8.4024	559.50	715.32	908.14	641.392	573.845	26.501	17.909	.7703	51.97	1.43	14.534	.0834
19	8.4627	518.71	727.54	893.51	644.376	578.399	26.462	18.154	.7545	54.51	-.04	15.382	.0838
20	8.5321	459.02	741.34	871.94	647.801	585.557	26.417	18.506	.7322	58.23	-1.95	24.299	.0845
21	8.6199	365.14	758.46	841.78	652.128	594.134	26.361	18.985	.7018	64.29	-4.27	-27.461	.0854

BLADE DATA

LOCAT -ION	BLADE-ANGLES SECTION	BLADE-ANGLES LEAN	REL FLOW ANGLE	DEVIATION INCIDENCE	LOSS COEFF	BLADE SPEED	RELATIVE MACH NO	RELATIVE VELOCITY	RELATIVE PRESSURE	RELATIVE TEMPERATURE	PRESSURE RATIO	DELTA T ON T	ISENTROPIC EFFICIENCY	POLYTROPIC EFFICIENCY
1	48.817	-39.941	46.327	-2.490	0.0000	0.0	.7712	893.34	27.213	619.251	1.852	.194	.9878	.9888
2	48.041	-37.009	44.932	-3.109	0.0000	0.0	.7852	907.71	27.194	619.153	1.850	.194	.9875	.9885
3	47.278	-33.884	43.742	-3.535	0.0000	0.0	.7975	920.30	27.175	619.358	1.849	.194	.9872	.9883
4	46.710	-30.667	42.797	-3.913	0.0000	0.0	.8070	930.00	27.157	618.366	1.848	.193	.9870	.9881
5	46.256	-27.407	42.062	-4.194	0.0000	0.0	.8138	936.79	27.140	618.373	1.847	.193	.9868	.9879
6	45.892	-24.152	41.485	-4.406	0.0000	0.0	.8182	941.23	27.124	618.780	1.846	.193	.9867	.9878
7	45.565	-20.959	41.015	-4.550	0.0000	0.0	.8204	943.36	27.096	618.516	1.844	.193	.9865	.9876
8	45.272	-17.829	40.627	-4.645	0.0000	0.0	.8211	943.90	27.064	618.425	1.842	.192	.9863	.9875
9	45.016	-14.613	40.303	-4.713	0.0000	0.0	.8207	943.34	27.033	618.232	1.839	.192	.9862	.9873
10	44.809	-11.122	40.642	-4.167	0.0000	0.0	.8197	943.22	27.007	619.438	1.838	.194	.9727	.9749
11	44.667	-7.293	41.321	-3.346	0.0000	0.0	.8181	943.07	26.983	621.342	1.836	.198	.9531	.9569
12	44.620	-3.399	42.043	-2.577	0.0000	0.0	.8159	942.30	26.959	623.271	1.834	.202	.9340	.9394
13	44.696	.217	42.752	-1.944	0.0000	0.0	.8109	938.32	26.875	624.817	1.829	.205	.9152	.9221
14	44.885	3.568	43.513	-1.372	0.0000	0.0	.8048	933.16	26.779	626.323	1.822	.208	.8965	.9849
15	45.124	7.369	44.348	-.775	0.0000	0.0	.7978	927.14	26.681	627.862	1.815	.210	.8788	.8877
16	45.346	12.551	46.657	1.311	0.0000	0.0	.7910	923.46	26.617	632.463	1.811	.219	.8388	.8516
17	45.637	19.398	49.438	3.801	0.0000	0.0	.7828	917.67	26.552	637.504	1.807	.229	.7995	.8157
18	46.234	27.146	51.969	5.735	0.0000	0.0	.7703	908.14	26.501	641.392	1.803	.237	.7714	.7893
19	47.326	34.732	54.512	7.187	0.0000	0.0	.7545	893.51	26.462	644.376	1.801	.242	.7518	.7785
20	48.801	41.486	58.235	9.434	0.0000	0.0	.7322	871.94	26.417	647.801	1.798	.249	.7287	.7499
21	50.814	46.652	54.293	13.479	0.0000	0.0	.7018	841.78	26.361	652.128	1.794	.257	.7022	.7254

STATION 11 INTEGRATED PERFORMANCE PRESSURE RATIO = 1.827 ISEN. EFF.= .898 POLY. EFF.= .899 DELTA T ON T = .218

STATION 12 FLOW FIELD DESCRIPTION

STREAM LINE	RADIUS	VELOCITIES MERID	VELOCITIES TANGEN	VELOCITIES TOTAL	TEMPERATURES TOTAL	TEMPERATURES STATIC	PRESSURES TOTAL	PRESSURES STATIC	MACH NO	ANGLES WHIRL	ANGLES SLOPE	RADIUS OF CURVATURE	SPECIFIC WEIGHT
1	7.7150	855.20	551.31	1017.51	519.251	534.350	26.869	15.996	.8941	32.81	5.21	-3.688	.0800
2	7.7539	844.77	539.49	1002.34	619.153	536.767	26.853	16.251	.8788	32.56	4.56	-3.588	.0809
3	7.7927	834.25	526.64	986.58	619.058	539.247	26.836	16.514	.8630	32.26	3.95	-3.512	.0819
4	7.8314	823.78	513.51	970.66	618.966	541.713	26.814	16.776	.8472	31.94	3.48	-3.494	.0828
5	7.8782	812.94	501.20	955.03	618.873	544.891	26.787	17.029	.8317	31.65	2.92	-3.526	.0837
6	7.9091	801.56	490.30	939.62	618.780	546.394	26.745	17.265	.8166	31.45	2.52	-3.595	.0845
7	7.9482	789.97	480.74	924.75	618.616	548.586	26.692	17.482	.8021	31.32	2.23	-3.691	.0852
8	7.9878	778.95	471.92	910.75	618.425	550.424	26.636	17.680	.7886	31.21	2.05	-3.803	.0858
9	8.0280	768.92	463.70	897.92	618.232	552.135	26.585	17.860	.7763	31.09	1.96	-3.925	.0865
10	8.0687	760.92	456.93	887.57	619.438	554.860	26.550	18.023	.7655	30.98	1.95	-4.072	.0868
11	8.1101	753.83	451.45	878.67	621.342	558.860	26.517	18.178	.7557	30.92	1.97	-4.278	.0870
12	8.1523	747.02	447.21	870.65	623.271	561.145	26.485	18.303	.7467	30.91	2.03	-4.538	.0872
13	8.1951	739.88	443.36	861.86	624.817	563.345	26.424	18.421	.7374	30.96	2.10	-4.894	.0873
14	8.2387	731.18	440.31	853.52	626.323	566.628	26.355	18.524	.7285	31.06	2.17	-5.371	.0874
15	8.2830	723.86	438.17	846.15	627.852	569.198	26.285	18.610	.7206	31.19	2.23	-6.036	.0874
16	8.3281	720.13	439.47	843.69	632.463	574.153	26.252	18.675	.7154	31.39	2.22	-7.172	.0869
17	8.3740	716.95	443.78	843.14	637.584	579.283	26.218	18.712	.7118	31.75	2.03	-9.763	.0863
18	8.4209	714.12	451.81	845.04	641.392	582.315	26.194	18.705	.7112	32.32	1.61	-18.834	.0858
19	8.4692	713.22	463.68	850.69	644.376	585.123	26.171	18.631	.7146	33.07	.98	138.842	.0851
20	8.5196	715.95	478.92	861.37	647.801	587.060	26.137	18.476	.7224	33.78	-.24	12.358	.0841
21	8.5730	721.71	497.09	876.34	652.128	589.268	26.084	18.250	.7336	34.56	-2.03	5.947	.0828

BLADE DATA

LOCATION	BLADE-ANGLES SECTION	BLADE-ANGLES LEAN	REL FLOW ANGLE	DEVIATION INCIDENCE	LOSS COEFF	BLADE SPEED	RELATIVE MACH NO	RELATIVE VELOCITY	RELATIVE PRESSURE	RELATIVE TEMPERATURE	PRESSURE RATIO	DELTA T ON T	ISENTROPIC EFFICIENCY	POLYTROPIC EFFICIENCY
1	31.959	-24.847	32.808	.849	.0390	0.0	.8941	1017.51	26.869	619.251	1.828	.194	.9656	.9683
2	31.706	-23.360	32.563	.858	.0375	0.0	.8788	1002.34	26.853	619.153	1.827	.194	.9655	.9683
3	31.393	-21.394	32.263	.870	.0355	0.0	.8630	986.58	26.836	619.058	1.826	.194	.9653	.9681
4	31.054	-19.125	31.940	.886	.0363	0.0	.8472	970.66	26.814	618.966	1.825	.193	.9647	.9676
5	30.750	-16.770	31.655	.905	.0369	0.0	.8317	955.03	26.787	618.873	1.823	.193	.9639	.9668
6	30.527	-14.526	31.454	.927	.0393	0.0	.8165	939.62	26.745	618.780	1.820	.193	.9621	.9651
7	30.374	-12.405	31.323	.949	.0418	0.0	.8021	924.75	26.692	618.616	1.816	.193	.9602	.9634
8	30.239	-10.324	31.209	.970	.0443	0.0	.7886	910.75	26.636	618.425	1.812	.192	.9583	.9616
9	30.102	-8.205	31.092	.991	.0464	0.0	.7763	897.92	26.585	618.232	1.809	.192	.9568	.9603
10	29.976	-6.042	30.985	1.009	.0475	0.0	.7655	887.57	26.550	619.438	1.807	.194	.9431	.9476
11	29.892	-3.888	30.917	1.024	.0487	0.0	.7557	878.67	26.517	621.342	1.804	.198	.9234	.9295
12	29.870	-1.800	30.907	1.037	.0497	0.0	.7467	870.65	26.485	623.271	1.802	.202	.9043	.9119
13	29.913	.286	30.958	1.046	.0479	0.0	.7374	861.86	26.424	624.817	1.798	.205	.8873	.8962
14	30.006	2.550	31.056	1.050	.0457	0.0	.7285	853.52	26.355	626.323	1.793	.208	.8705	.8808
15	30.138	5.180	31.188	1.050	.0433	0.0	.7206	846.15	26.285	627.852	1.789	.210	.8541	.8655
16	30.347	8.263	31.392	1.045	.0405	0.0	.7154	843.69	26.252	632.463	1.786	.219	.8176	.8318
17	30.711	11.817	31.752	1.041	.0379	0.0	.7118	843.14	26.218	637.584	1.784	.229	.7849	.7979
18	31.280	15.827	32.321	1.041	.0358	0.0	.7112	845.04	26.194	641.392	1.782	.237	.7548	.7737
19	31.985	20.079	33.029	1.044	.0351	0.0	.7146	850.69	26.171	644.376	1.781	.242	.7356	.7560
20	32.725	24.263	33.780	1.055	.0354	0.0	.7224	861.37	26.137	647.501	1.779	.249	.7143	.7363
21	33.478	28.225	34.557	1.080	.0375	0.0	.7336	876.34	26.084	652.128	1.775	.257	.6885	.7123

STATION 12 INTEGRATED PERFORMANCE PRESSURE RATIO = 1.801 ISEN. EFF. = .867 POLY. EFF. = .878 DELTA T ON T = .218

STATION 13 FLOW FIELD DESCRIPTION

STREAM-LINE	RADIUS	VELOCITIES MERID	VELOCITIES TANGEN	VELOCITIES TOTAL	TEMPERATURES TOTAL	TEMPERATURES STATIC	PRESSURES TOTAL	PRESSURES STATIC	MACH NO	ANGLES WHIRL	ANGLES SLOPE	RADIUS OF CURVATURE	SPECIFIC WEIGHT
1	7.7230	782.19	247.90	820.54	619.251	564.069	26.536	19.107	.7019	17.58	-2.23	-5.196	.0905
2	7.7566	769.74	243.31	807.28	619.153	565.742	26.513	19.300	.6896	17.54	-2.36	-5.787	.0912
3	7.7911	757.67	239.27	794.56	619.058	567.319	26.487	19.482	.6778	17.53	-2.46	-6.526	.0918
4	7.8263	746.08	235.66	782.41	618.966	568.795	26.457	19.649	.6665	17.53	-2.53	-7.450	.0923
5	7.8625	735.10	232.23	770.91	618.873	570.170	26.424	19.802	.6560	17.53	-2.55	-8.607	.0928
6	7.8996	723.75	228.28	758.93	618.780	571.588	26.360	19.937	.6450	17.51	-2.52	-10.054	.0932
7	7.9378	713.15	224.15	747.55	618.616	572.822	26.286	20.052	.6346	17.45	-2.43	-11.864	.0936
8	7.9772	703.49	220.[illegible]	737.16	618.425	573.895	26.208	20.146	.6252	17.39	-2.27	-14.113	.0938
9	8.0178	695.35	217.41	728.54	618.232	574.739	26.140	20.221	.6175	17.36	-2.07	-16.890	.0940
10	8.0590	690.02	216.04	723.05	619.438	576.500	26.097	20.278	.6118	17.39	-1.82	-20.241	.0940
11	8.1024	685.93	215.34	718.94	621.342	578.394	26.054	20.321	.6071	17.43	-1.53	-24.162	.0938
12	8.1463	682.75	214.77	715.73	623.271	581.304	26.013	20.352	.6032	17.46	-1.22	-28.575	.0936
13	8.1912	679.93	214.14	712.91	624.817	583.184	25.971	20.373	.5999	17.48	-.89	-33.159	.0934
14	8.2370	677.55	213.64	710.43	626.323	584.982	25.925	20.384	.5969	17.50	-.56	-37.318	.0931
15	8.2837	675.60	213.54	708.54	627.862	586.743	25.879	20.387	.5944	17.54	-.23	-40.745	.0929
16	8.3313	677.69	215.26	711.06	632.463	591.053	25.871	20.382	.5943	17.62	.09	-43.689	.0922
17	8.3796	680.41	218.11	714.52	637.504	595.706	25.864	20.367	.5949	17.77	.38	-47.268	.0914
18	8.4285	683.34	222.32	718.59	641.392	599.124	25.864	20.341	.5966	18.02	.64	-55.063	.0907
19	8.4781	686.21	227.75	723.01	644.376	601.591	25.858	20.297	.5991	18.36	.83	-81.872	.0902
20	8.5284	690.05	234.50	728.80	647.801	604.335	25.844	20.232	.6025	18.77	.92	-426.265	.0895
21	8.5795	695.14	242.47	736.21	652.128	607.782	25.816	20.140	.6069	19.23	.88	76.314	.0886

BLADE DATA

LOCAT-ION	BLADE-ANGLES SECTION	BLADE-ANGLES LEAN	REL FLOW ANGLE	DEVIATION INCIDENCE	LOSS COEF	BLADE SPEED	RELATIVE MACH NO	RELATIVE VELOCITY	RELATIVE PRESSURE	RELATIVE TEMPERATURE	PRESSURE RATIO	DELTA T ON T	ISENTROPIC EFFICIENCY	POLYTROPIC EFFICIENCY
1	15.234	-9.414	17.585	1.351	.0765	0.0	.7019	820.54	26.536	619.251	1.806	.194	.9439	.9484
2	15.184	-8.925	17.541	1.357	.0750	0.0	.6895	807.28	26.513	619.153	1.804	.194	.9433	.9478
3	15.157	-8.373	17.526	1.369	.0740	0.0	.6778	794.56	26.487	619.058	1.802	.194	.9425	.9471
4	15.140	-7.745	17.529	1.383	.0740	0.0	.6665	782.41	26.457	618.966	1.800	.193	.9414	.9461
5	15.115	-7.028	17.532	1.417	.0749	0.0	.6560	770.91	26.424	618.873	1.798	.193	.9401	.9448
6	15.054	-6.208	17.506	1.452	.0793	0.0	.6450	758.93	26.360	618.780	1.794	.193	.9367	.9417
7	15.960	-5.296	17.449	1.489	.0838	0.0	.6345	747.55	26.286	618.616	1.789	.193	.9334	.9386
8	15.859	-4.328	17.386	1.527	.0885	0.0	.6252	737.16	26.208	618.425	1.783	.192	.9300	.9354
9	15.800	-3.352	17.363	1.563	.0925	0.0	.6175	728.54	26.140	618.232	1.779	.192	.9273	.9329
10	15.789	-2.416	17.385	1.596	.0945	0.0	.6115	723.05	26.097	619.438	1.776	.194	.9133	.9208
11	15.804	-1.567	17.423	1.625	.0969	0.0	.6071	718.94	26.054	621.342	1.773	.198	.8936	.9017
12	15.813	-.855	17.462	1.649	.0991	0.0	.6032	715.73	26.013	623.271	1.770	.202	.8744	.8841
13	15.813	-.254	17.480	1.667	.0959	0.0	.5999	712.91	25.971	624.817	1.767	.205	.8590	.8698
14	15.824	.356	17.501	1.677	.0920	0.0	.5969	710.43	25.925	626.323	1.764	.208	.8441	.8560
15	15.863	1.104	17.541	1.678	.0878	0.0	.5944	708.54	25.879	627.862	1.761	.210	.8294	.8423
16	15.951	2.016	17.622	1.671	.0830	0.0	.5943	711.06	25.871	632.463	1.760	.219	.7953	.8108
17	15.110	3.055	17.774	1.664	.0781	0.0	.5949	714.52	25.864	637.504	1.760	.229	.7611	.7791
18	15.362	4.195	18.022	1.660	.0742	0.0	.5966	718.59	25.864	641.392	1.760	.237	.7369	.7568
19	15.699	5.408	18.361	1.662	.0727	0.0	.5991	723.01	25.858	644.376	1.760	.242	.7198	.7402
20	17.091	6.920	18.769	1.678	.0725	0.0	.6025	728.80	25.844	647.801	1.759	.249	.6992	.7218
21	17.510	8.542	19.229	1.719	.0738	0.0	.6069	736.21	25.816	652.128	1.757	.257	.6750	.6994

STATION 13 INTEGRATED PERFORMANCE PRESSURE RATIO = 1.775 ISEN. EFF.= .844 POLY. EFF.= .856 DELTA T ON T = .210

STATION 14 FLOW FIELD DESCRIPTION

STREAM -LINE	RADIUS	VELOCITIES MERID	VELOCITIES TANGEN	VELOCITIES TOTAL	TEMPERATURES TOTAL	TEMPERATURES STATIC	PRESSURES TOTAL	PRESSURES STATIC	MACH NO	ANGLES WHIRL	ANGLES SLOPE	RADIUS OF CURVATURE	SPECIFIC WEIGHT
1	7.5720	656.10	71.07	659.94	619.251	583.569	26.203	21.262	.5551	6.18	-4.29	16.241	.0974
2	7.7093	654.27	69.50	657.95	619.153	583..87	26.166	21.259	.5534	6.06	-4.11	17.147	.0973
3	7.7474	652.34	68.03	655.88	619.058	583.8'5	26.128	21.256	.5516	5.95	-3.91	18.156	.0973
4	7.7863	650.28	66.75	653.70	618.966	583.9:7	26.087	21.252	.5497	5.86	-3.70	19.286	.0973
5	7.8261	648.03	65.65	651.40	618.873	584.110	26.044	21.248	.5477	5.78	-3.48	20.557	.0972
6	7.8667	643.34	64.42	646.56	618.780	584.532	25.957	21.242	.5434	5.72	-3.24	22.813	.0971
7	7.9085	638.11	63.25	641.24	618.616	584.929	25.864	21.236	.5388	5.66	-2.98	23.739	.0970
8	7.9513	632.55	62.13	635.61	618.425	585.328	25.766	21.230	.5339	5.61	-2.69	25.855	.0969
9	7.9953	627.95	61.21	630.93	618.232	585.628	25.685	21.223	.5298	5.57	-2.37	28.456	.0969
10	8.0403	626.05	60.67	628.98	619.438	587.029	25.635	21.216	.5275	5.54	-2.04	31.604	.0966
11	8.0863	624.50	60.27	627.40	621.342	589.099	25.586	21.208	.5253	5.51	-1.78	35.348	.0962
12	8.1333	623.14	59.98	625.02	623.271	591.172	25.539	21.200	.5232	5.50	-1.35	39.734	.0958
13	8.1812	623.40	59.93	626.27	624.817	592.695	25.520	21.191	.5228	5.49	-1.00	45.230	.0956
14	8.2300	623.60	59.94	626.48	626.323	594.182	25.500	21.182	.5223	5.49	-.66	52.732	.0953
15	8.2794	623.89	60.05	626.77	627.662	595.692	25.481	21.172	.5219	5.50	-.34	63.351	.0950
16	8.3296	628.14	60.73	631.07	632.463	599.857	25.500	21.162	.5236	5.52	-.04	79.297	.0943
17	8.3804	632.62	61.71	635.62	637.504	604.434	25.528	21.153	.5254	5.57	.23	105.307	.0935
18	8.4318	636.55	63.07	639.71	641.392	607.901	25.543	21.144	.5273	5.66	.48	155.765	.0930
19	8.4838	639.03	64.92	642.32	644.376	610.615	25.551	21.136	.5283	5.80	.70	289.701	.0925
20	8.5365	641.14	67.62	644.70	647.801	613.795	25.553	21.129	.5289	6.02	.90	1305.219	.0920
21	8.5900	643.10	71.30	647.04	652.128	617.883	25.548	21.123	.5291	6.33	1.06	-610.607	.0914

BLADE DATA

LOCAT -ION	BLADE-ANGLES SECTION	BLADE-ANGLES LEAN	REL FLOW ANGLE	DEVIATION INCIDENCE	LOSS COEFF	BLADE SPEED	RELATIVE MACH NO	RELATIVE VELOCITY	RELATIVE PRESSURE	RELATIVE TEMPERATURE	PRESSURE RATIO	DELTA T ON T	ISENTROPIC EFFICIENCY	POLYTROPIC EFFICIENCY
1	3.965	-1.054	6.183	2.218	.1143	0.0	.5551	659.94	26.203	619.251	1.783	.194	.9220	.9281
2	3.835	-.996	6.064	2.228	.1132	0.0	.5534	657.95	26.166	619.153	1.780	.194	.9205	.9266
3	3.705	-.924	5.954	2.249	.1127	0.0	.5515	655.88	26.128	619.058	1.778	.194	.9188	.9251
4	3.579	-.842	5.861	2.282	.1132	0.0	.5497	653.70	26.087	618.966	1.775	.193	.9170	.9234
5	3.459	-.755	5.784	2.326	.1145	0.0	.5477	651.40	26.044	618.873	1.772	.193	.9149	.9215
6	3.341	-.669	5.719	2.378	.1210	0.0	.5434	646.56	25.957	618.780	1.766	.193	.9100	.9169
7	3.225	-.591	5.660	2.436	.1274	0.0	.5388	641.24	25.864	618.616	1.760	.193	.9053	.9125
8	3.112	-.523	5.609	2.497	.1342	0.0	.5339	635.61	25.766	618.425	1.753	.192	.9005	.9080
9	3.008	-.454	5.557	2.560	.1397	0.0	.5298	630.93	25.685	618.232	1.748	.192	.8967	.9044
10	2.917	-.413	5.535	2.619	.1425	0.0	.5275	628.98	25.635	619.438	1.744	.194	.8826	.8914
11	2.842	-.359	5.512	2.670	.1457	0.0	.5253	627.40	25.586	621.342	1.741	.198	.8630	.8732
12	2.787	-.290	5.498	2.711	.1489	0.0	.5232	626.02	25.539	623.271	1.738	.202	.8440	.8556
13	2.754	-.204	5.491	2.737	.1437	0.0	.5228	626.27	25.520	624.817	1.737	.205	.8305	.8430
14	2.747	-.143	5.490	2.744	.1377	0.0	.5223	626.48	25.500	626.323	1.735	.208	.8176	.8311
15	2.768	-.154	5.498	2.730	.1314	0.0	.5219	626.77	25.481	627.662	1.734	.210	.8048	.8193
16	2.817	-.251	5.522	2.705	.1243	0.0	.5236	631.07	25.500	632.463	1.735	.219	.7734	.7901
17	2.890	-.418	5.572	2.682	.1171	0.0	.5254	635.62	25.520	637.504	1.737	.229	.7416	.7607
18	2.984	-.629	5.658	2.674	.1115	0.0	.5273	639.71	25.543	641.392	1.738	.237	.7193	.7400
19	3.114	-.832	5.801	2.687	.1097	0.0	.5283	642 32	25.551	644.376	1.739	.242	.7026	.7246
20	3.291	-.974	6.021	2.730	.1093	0.0	.5289	644.70	25.553	647.301	1.739	.249	.6848	.7073
21	3.508	-1.055	6.326	2.818	.1102	0.0	.5291	647.04	25.548	652.128	1.738	.257	.6615	.6865

STATION 14 INTEGRATED PERFORMANCE PRESSURE RATIO = 1.749 ISEN. EFF.= .820 POLY. EFF.= .833 DELTA T ON T = .210

STATION 15 FLOW FIELD DESCRIPTION

STREAM -LINE	RADIUS	VELOCITIES MERID	VELOCITIES TANGEN	VELOCITIES TOTAL	TEMPERATURES TOTAL	TEMPERATURES STATIC	PRESSURES TOTAL	PRESSURES STATIC	MACH NO	ANGLES WHIRL	ANGLES SLOPE	RADIUS OF CURVATURE	SPECIFIC WEIGHT
1	7.6400	618.57	0.00	618.57	619.251	587.305	25.870	21.546	.5184	0.00	-1.66	10.624	.0980
2	7.6731	617.59	0.00	617.59	619.153	587.307	25.820	21.516	.5176	0.00	-1.63	11.068	.0978
3	7.7191	616.48	0.00	616.48	619.058	587.925	25.769	21.488	.5166	0.00	-1.59	11.587	.0977
4	7.7600	615.20	0.00	615.20	618.966	587.961	25.716	21.460	.5156	0.00	-1.54	12.202	.0976
5	7.8017	613.75	0.00	613.76	618.873	588.013	25.662	21.433	.5143	0.00	-1.48	12.948	.0974
6	7.8445	608.54	0.00	608.54	618.780	588.443	25.553	21.407	.5098	0.00	-1.40	13.872	.0972
7	7.8884	602.83	0.00	602.83	618.616	588.845	25.439	21.384	.5048	0.00	-1.31	15.120	.0971
8	7.9336	596.62	0.00	596.62	618.425	589.265	25.322	21.362	.4994	0.00	-1.28	16.844	.0969
9	7.9800	591.64	0.00	591.64	618.232	589.557	25.227	21.342	.4952	0.00	-1.07	19.308	.0968
10	8.0275	589.92	0.00	589.92	619.438	590.931	25.174	21.326	.4931	0.00	-.93	22.925	.0965
11	8.0759	588.20	0.00	588.20	621.342	593.004	25.119	21.311	.4909	0.00	-.77	28.571	.0961
12	8.1254	586.33	0.00	586.33	623.271	595.111	25.067	21.300	.4885	0.00	-.61	38.552	.0957
13	8.1757	587.99	0.00	587.99	624.817	596.504	25.070	21.293	.4892	0.00	-.44	59.131	.0954
14	8.2267	589.32	0.00	589.32	626.323	597.884	25.074	21.288	.4898	0.00	-.28	118.692	.0952
15	8.2783	590.42	0.00	590.42	627.862	599.319	25.077	21.286	.4901	0.00	-.13	1832.713	.0949
16	8.3306	595.44	0.00	595.44	632.463	603.438	25.119	21.287	.4926	0.00	.01	-151.698	.0943
17	8.3834	600.63	0.00	600.63	637.504	607.977	25.164	21.291	.4951	0.00	.14	-77.779	.0936
18	8.4366	605.11	0.00	605.11	641.392	611.428	25.209	21.297	.4974	0.00	.26	-54.839	.0931
19	8.4905	607.54	0.00	607.54	644.376	614.175	25.233	21.305	.4983	0.00	.36	-43.818	.0927
20	8.5449	609.93	0.00	609.93	647.801	617.367	25.257	21.315	.4989	0.00	.45	-37.563	.0923
21	8.6000	612.63	0.00	612.63	652.128	621.431	25.280	21.327	.4995	0.00	.52	-33.985	.0917

BLADE DATA

LOCAT -ION	BLADE-ANGLES SECTION	BLADE-ANGLES LEAN	REL FLOW ANGLE	DEVIATION INCIDENCE	LOSS COEFF	BLADE SPEED	RELATIVE MACH NO	RELATIVE VELOCITY	RELATIVE PRESSURE	RELATIVE TEMPERATURE	PRESSURE RATIO	DELTA T ON T	ISENTROPIC EFFICIENCY	POLYTROPIC EFFICIENCY
1	-7.239	.020	0.000	7.239	.1520	0.0	.5184	618.57	25.870	619.251	1.760	.194	.8999	.9075
2	-7.393	.020	0.000	7.393	.1513	0.0	.5175	617.59	25.820	619.153	1.757	.194	.8975	.9053
3	-7.557	.019	0.000	7.557	.1513	0.0	.5166	616.48	25.769	619.358	1.753	.194	.8949	.9028
4	-7.724	.018	0.000	7.724	.1524	0.0	.5155	615.20	25.716	618.966	1.750	.193	.8922	.9003
5	-7.891	.015	0.000	7.891	.1544	0.0	.5143	613.76	25.662	618.873	1.746	.193	.8894	.8977
6	-8.058	.014	0.000	8.058	.1630	0.0	.5098	608.54	25.553	618.780	1.739	.193	.8829	.8916
7	-8.223	.012	0.000	8.223	.1713	0.0	.5045	602.83	25.439	618.516	1.731	.193	.8766	.8857
8	-8.384	.010	0.000	8.384	.1802	0.0	.4994	596.62	25.322	618.425	1.723	.192	.8703	.8798
9	-8.538	.008	0.000	8.538	.1871	0.0	.4952	591.64	25.227	618.232	1.717	.192	.8655	.8753
10	-8.678	.007	0.000	8.678	.1904	0.0	.4931	589.92	25.174	619.438	1.713	.194	.8516	.8623
11	-8.802	.005	0.000	8.802	.1944	0.0	.4909	588.20	25.119	621.342	1.709	.198	.8321	.8442
12	-8.906	.003	0.000	8.906	.1983	0.0	.4885	586.38	25.067	623.271	1.706	.202	.8133	.8267
13	-8.989	.001	0.000	8.989	.1915	0.0	.4892	587.99	25.070	624.817	1.706	.205	.8016	.8159
14	-9.043	-.001	0.000	9.043	.1837	0.0	.4898	589.32	25.074	626.323	1.706	.208	.7906	.8056
15	-9.063	-.004	0.000	9.063	.1755	0.0	.4901	590.42	25.077	627.862	1.706	.210	.7796	.7955
16	-9.059	-.008	0.000	9.059	.1667	0.0	.4925	595.44	25.119	632.463	1.709	.219	.7506	.7685
17	-9.060	-.012	0.000	9.060	.1575	0.0	.4951	600.63	25.164	637.504	1.712	.229	.7212	.7418
18	-9.085	-.018	0.000	9.085	.1504	0.0	.4974	605.11	25.209	641.392	1.715	.237	.7088	.7224
19	-9.126	-.024	0.000	9.126	.1479	0.0	.4983	607.54	25.233	644.376	1.717	.242	.6855	.7082
20	-9.169	-.031	0.000	9.169	.1467	0.0	.4989	609.93	25.257	647.801	1.719	.249	.6685	.6924
21	-9.213	-.038	0.000	9.213	.1465	0.0	.4995	612.63	25.280	652.128	1.720	.257	.6479	.6734

STATION 15 INTEGRATED PERFORMANCE PRESSURE RATIO = 1.722 ISEN. EFF.= .796 POLY. EFF.= .811 DELTA T ON T = .210

STATION 16 FLOW FIELD DESCRIPTION

STREAM LINE	RADIUS	VELOCITIES MERID	VELOCITIES TANGEN	VELOCITIES TOTAL	TEMPERATURES TOTAL	TEMPERATURES STATIC	PRESSURES TOTAL	PRESSURES STATIC	MACH NO	ANGLES WHIRL	ANGLES SLOPE	RADIUS OF CURVATURE	SPECIFIC WEIGHT
1	7.6400	634.10	0.00	634.10	619.251	586.311	25.870	21.341	.5321	0.00	0.00	0.000	.0973
2	7.6785	630.95	0.00	630.96	619.153	586.539	25.820	21.341	.5294	0.00	-.03	1216.203	.0972
3	7.7179	627.73	0.00	627.73	619.058	586.777	25.769	21.340	.5266	0.00	-.05	552.423	.0972
4	7.7583	624.42	0.00	624.42	618.966	587.024	25.716	21.340	.5237	0.00	-.07	469.733	.0972
5	7.7997	621.82	0.00	621.82	618.873	587.279	25.662	21.339	.5207	0.00	-.09	383.335	.0971
6	7.8422	613.97	0.00	613.97	618.780	587.900	25.553	21.338	.5146	0.00	-.10	336.063	.0970
7	7.8859	606.53	0.00	606.53	618.616	588.480	25.439	21.337	.5081	0.00	-.11	309.439	.0965
8	7.9310	598.71	0.00	598.71	618.425	589.061	25.322	21.336	.5013	0.00	-.12	296.320	.0968
9	7.9773	592.28	0.00	592.28	618.232	589.495	25.227	21.335	.4957	0.00	-.12	293.734	.0967
10	8.0248	589.25	0.00	589.28	619.438	590.993	25.174	21.333	.4926	0.00	-.11	300.792	.0965
11	8.0734	586.49	0.00	586.49	621.342	593.169	25.119	21.332	.4894	0.00	-.11	317.987	.0961
12	8.1231	583.83	0.00	583.83	623.271	595.355	25.067	21.331	.4863	0.00	-.10	347.417	.0958
13	8.1737	584.85	0.00	584.86	624.817	596.805	25.070	21.330	.4865	0.00	-.09	392.873	.0956
14	8.2250	585.87	0.00	585.87	626.323	598.215	25.074	21.329	.4868	0.00	-.08	460.980	.0953
15	8.2769	586.88	0.00	586.88	627.862	599.659	25.077	21.329	.4871	0.00	-.06	564.693	.0951
16	8.3295	592.04	0.00	592.04	632.463	603.765	25.119	21.328	.4897	0.00	-.05	728.618	.0944
17	8.3825	597.60	0.00	597.60	637.504	608.275	25.164	21.328	.4925	0.00	-.04	1004.758	.0937
18	8.4361	602.61	0.00	602.61	641.392	611.675	25.209	21.327	.4952	0.00	-.02	1523.743	.0932
19	8.4902	605.74	0.00	605.74	644.376	614.353	25.233	21.327	.4967	0.00	-.01	2707.375	.0928
20	8.5448	608.97	0.00	608.97	647.801	617.463	25.257	21.327	.4981	0.00	-.01	5813.836	.0923
21	8.6000	612.63	0.00	612.63	652.128	621.431	25.280	21.327	.4995	0.00	0.00	0.000	.0917

STATION 17 FLOW FIELD DESCRIPTION

STREAM LINE	RADIUS	VELOCITIES MERID	VELOCITIES TANGEN	VELOCITIES TOTAL	TEMPERATURES TOTAL	TEMPERATURES STATIC	PRESSURES TOTAL	PRESSURES STATIC	MACH NO	ANGLES WHIRL	ANGLES SLOPE	RADIUS OF CURVATURE	SPECIFIC WEIGHT
1	7.6400	635.14	0.00	635.14	619.251	586.203	25.870	21.327	.5331	0.00	0.00	0.000	.0972
2	7.6784	631.99	0.00	631.99	619.153	586.432	25.820	21.327	.5303	0.00	-.00	0.000	.0972
3	7.7179	628.74	0.00	628.74	619.058	586.573	25.769	21.327	.5275	0.00	-.00	0.000	.0972
4	7.7582	625.39	0.00	625.39	618.966	586.925	25.716	21.327	.5246	0.00	-.00	0.000	.0971
5	7.7996	621.93	0.00	621.93	618.873	587.186	25.662	21.327	.5215	0.00	-.00	0.000	.0971
6	7.8420	614.82	0.00	614.82	618.780	587.814	25.553	21.327	.5153	0.00	-.00	0.000	.0970
7	7.8858	607.31	0.00	607.31	618.616	588.402	25.439	21.327	.5088	0.00	-.01	0.000	.0969
8	7.9308	599.41	0.00	599.41	618.425	588.992	25.322	21.327	.5019	0.00	-.01	0.000	.0968
9	7.9772	592.89	0.00	592.89	618.232	589.436	25.227	21.327	.4963	0.00	-.01	0.000	.0967
10	8.0247	589.81	0.00	589.81	619.438	590.942	25.174	21.327	.4930	0.00	-.01	0.000	.0965
11	8.0732	586.92	0.00	586.92	621.342	593.127	25.119	21.327	.4897	0.00	-.01	0.000	.0961
12	8.1229	584.18	0.00	584.18	623.271	595.322	25.067	21.327	.4866	0.00	-.01	0.000	.0957
13	8.1735	585.13	0.00	585.13	624.817	596.779	25.070	21.327	.4868	0.00	-.01	0.000	.0955
14	8.2248	586.07	0.00	586.07	626.323	598.197	25.074	21.327	.4870	0.00	-.01	0.000	.0953
15	8.2768	587.02	0.00	587.02	627.862	599.545	25.077	21.327	.4872	0.00	-.01	0.000	.0951
16	8.3293	592.14	0.00	592.14	632.463	603.759	25.119	21.327	.4898	0.00	-.00	0.000	.0944
17	8.3824	597.65	0.00	597.65	637.504	608.278	25.164	21.327	.4925	0.00	-.00	0.000	.0937
18	8.4360	602.64	0.00	602.64	641.392	611.573	25.209	21.327	.4953	0.00	-.00	0.000	.0932
19	8.4901	605.75	0.00	605.75	644.376	614.352	25.233	21.327	.4967	0.00	-.00	0.000	.0928
20	8.5448	608.97	0.00	608.97	647.801	17.463	25.257	21.327	.4981	0.00	-.00	0.000	.0923
21	8.6000	612.63	0.00	612.63	652.128	621.431	25.280	21.327	.4995	0.00	0.00	0.000	.0917

ROTOR PERFORMANCE

LOCAT -ION	INLET RADIUS	OUTLET RADIUS	INLET M. NO	INCID -ENCE	DEVIA -TION	LOSS COEFF	2-D D FACTOR	3-D D FACTOR	DELTA P ON Q	REL V RATIO	DELTA H/U**2	SECTION-ANGLES INLET	SECTION-ANGLES OUTLET	LEAN-ANGLES INLET	LEAN-ANGLES OUTLET
1	6.7500	7.5499	.7992	8.113	14.539	.0221	.4127	.4220	.6430	.7285	.6938	-62.667	-11.816	17.285	2.399
2	6.8667	7.5918	.8122	8.373	14.388	.0219	.4251	.4335	.6321	.7177	.6855	-62.580	-12.871	16.450	2.627
3	6.9828	7.6346	.8254	8.520	14.182	.0217	.4357	.4431	.6199	.7085	.6772	-62.571	-13.935	15.428	2.895
4	7.0980	7.6782	.8385	8.578	13.944	.0214	.4445	.4510	.6069	.7003	.6689	-62.629	-14.990	14.131	3.190
5	7.2123	7.7226	.8516	8.626	13.696	.0210	.4518	.4574	.5933	.6945	.6606	-62.686	-16.015	12.735	3.435
6	7.3256	7.7676	.8646	8.694	13.464	.0205	.4578	.4625	.5794	.6894	.6524	-62.715	-16.988	11.480	3.731
7	7.4381	7.8134	.8775	8.739	13.315	.0203	.4624	.4663	.5652	.6852	.6437	-62.775	-17.889	10.254	4.050
8	7.5498	7.8597	.8902	8.738	13.230	.0199	.4659	.4691	.5507	.6813	.6349	-62.885	-18.705	9.335	4.288
9	7.6607	7.9066	.9028	8.724	13.185	.0195	.4584	.4700	.5361	.6795	.6262	-63.017	-19.444	8.501	4.476
10	7.7711	7.9545	.9152	8.728	12.916	.0379	.4829	.4847	.5213	.6671	.6262	-63.145	-20.119	7.633	4.629
11	7.8812	8.0037	.9275	8.747	12.578	.0542	.5027	.5039	.5066	.6582	.6302	-63.272	-20.744	6.803	4.752
12	7.9909	8.0546	.9396	8.773	12.296	.0892	.5215	.5221	.4920	.6342	.6340	-63.406	-21.331	6.120	4.848
13	8.1007	8.1073	.9516	8.812	12.318	.1129	.5385	.5385	.4775	.6192	.6350	-63.542	-21.888	5.601	4.918
14	8.2105	8.1620	.9635	8.877	12.448	.1354	.5546	.5541	.4632	.6045	.6355	-63.667	-22.414	5.214	4.956
15	8.3205	8.2187	.9754	8.976	12.554	.1573	.5700	.5690	.4490	.5903	.6357	-63.775	-22.906	4.896	4.954
16	8.4310	8.2786	.9871	9.107	12.592	.2083	.6117	.6102	.4353	.5549	.6530	-63.872	-23.364	4.550	4.899
17	8.5423	8.3439	.9987	9.263	12.987	.2599	.6580	.6560	.4225	.5145	.6714	-63.966	-23.795	4.107	4.769
18	8.6544	8.4152	1.0103	9.431	13.584	.2957	.6918	.6894	.4110	.4845	.6817	-64.075	-24.189	3.575	4.554
19	8.7678	8.4923	1.0218	9.603	14.601	.3201	.7151	.7124	.4006	.4633	.6857	-64.212	-24.526	2.984	4.271
20	8.8828	8.5758	1.0333	9.811	16.283	.3474	.7437	.7406	.3916	.4371	.6908	-64.356	-24.788	2.383	3.948
21	9.0000	8.6699	1.0446	10.099	19.543	.3815	.7845	.7813	.3853	.3993	.6986	-64.476	-24.964	1.836	3.617

STATOR PERFORMANCE

LOCAT -ION	INLET RADIUS	OUTLET RADIUS	INLET M. NO	INCID -ENCE	DEVIA -TION	LOSS COEFF	2-D D FACTOR	3-D D FACTOR	DELTA P ON Q	REL V RATIO	DELTA H/U**2	SECTION-ANGLES INLET	SECTION-ANGLES OUTLET	LEAN-ANGLES INLET	LEAN-ANGLES OUTLET
1	7.6199	7.6400	.7712	-2.490	7.239	.1520	.4581	.4579	.3589	.6924	0.0000	48.817	-7.239	-39.941	.020
2	7.6727	7.6791	.7852	-3.109	7.393	.1513	.4737	.4736	.3749	.6804	0.0000	48.041	-7.393	-37.009	.020
3	7.7229	7.7191	.7975	-3.535	7.557	.1513	.4877	.4878	.3880	.6693	0.0000	47.278	-7.557	-33.884	.019
4	7.7704	7.7600	.8070	-3.913	7.724	.1524	.4994	.4995	.3975	.6615	0.0000	46.710	-7.724	-30.667	.018
5	7.8157	7.8017	.8138	-4.194	7.891	.1544	.5089	.5090	.4036	.6552	0.0000	46.256	-7.891	-27.487	.016
6	7.8597	7.8445	.8182	-4.406	8.058	.1530	.5205	.5206	.4071	.6465	0.0000	45.892	-8.058	-24.152	.014
7	7.9027	7.8884	.8204	-4.550	8.223	.1713	.5307	.5308	.4094	.6393	0.0000	45.565	-8.223	-20.959	.012
8	7.9451	7.9336	.8211	-4.645	8.384	.1802	.5401	.5402	.4104	.6321	0.0000	45.272	-8.384	-17.829	.010
9	7.9872	7.9800	.8207	-4.713	8.538	.1871	.5471	.5471	.4105	.6272	0.0000	45.016	-8.538	-14.613	.008
10	8.0293	8.0275	.8197	-4.167	8.678	.1904	.5527	.5527	.4098	.6254	0.0000	44.809	-8.678	-11.122	.007
11	8.0718	8.0759	.8181	-3.346	8.802	.1944	.5590	.5590	.4086	.6237	0.0000	44.667	-8.802	-7.293	.005
12	8.1148	8.1254	.8159	-2.577	8.906	.1983	.5645	.5644	.4070	.6223	0.0000	44.620	-8.906	-3.399	.003
13	8.1586	8.1757	.8109	-1.944	8.989	.1915	.5635	.5633	.4077	.6265	0.0000	44.696	-8.989	.217	.001
14	8.2033	8.2267	.8048	-1.372	9.043	.1837	.5612	.5610	.4086	.6315	0.0000	44.885	-9.043	3.568	-.001
15	8.2490	8.2783	.7978	-.775	9.063	.1756	.5581	.5577	.4091	.6363	0.0000	45.124	-9.063	7.369	-.004
16	8.2966	8.3306	.7910	1.311	9.059	.1667	.5562	.5558	.4071	.6443	0.0000	45.346	-9.059	12.551	-.008
17	8.3474	8.3834	.7820	3.801	9.060	.1575	.5525	.5520	.4029	.6545	0.0000	45.637	-9.060	19.398	-.012
18	8.4024	8.4366	.7703	5.735	9.085	.1504	.5437	.5432	.3943	.6663	0.0000	46.234	-9.085	27.146	-.018
19	8.4627	8.4905	.7545	7.187	9.126	.1479	.5303	.5308	.3793	.6793	0.0000	47.326	-9.126	34.732	-.024
20	8.5321	8.5449	.7322	9.434	9.169	.1467	.5103	.5102	.3551	.6995	0.0000	48.801	-9.159	41.486	-.031
21	8.6199	8.6000	.7018	13.479	9.213	.1465	.4811	.4814	.3175	.7275	0.0000	50.814	-9.213	46.652	-.038

WAKE AND BOUNDARY LAYER BLOCKAGES (PERCENT)

STATION	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17
~~MID~~ BLOCKAGE	0.0	0.0	0.0	1.0	1.0	1.5	2.0	2.5	2.5	1.7	3.0	5.0	7.0	9.0	12.3	13.3	13.4
DIST FACTOR	1.0	1.0	1.0	1.0	1.0	.5	.5	.3	.2	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
INT BLOCKAGE	0.0	0.0	0.0	1.0	1.0	1.5	2.0	2.5	2.5	1.7	3.0	5.0	7.0	9.0	12.3	13.3	13.4

SUMMARY POINT NO. 1 THE CALCULATION IS CONVERGED PASS 23

TEST POINT TITLE = 208240215670

FLOW = 16.92 SPEED = 14266.8 PRESSURE RATIO = 1.722 ISENTROPIC EFFY = .7957 POLYTROPIC EFFY = .8106 DEL T/T = .2101

5. PHASE II WITHIN-BLADE ANALYSIS
(82% SPEED)
TEST POINT 20824III5882

STATION 1 FLOW FIELD DESCRIPTION

STREAM -LINE	RADIUS	------VELOCITIES------- MERID	TANGEN	TOTAL	--TEMPERATURES-- TOTAL	STATIC	---PRESSURES--- TOTAL	STATIC	MACH NO	---ANGLES--- WHIRL	SLOPE	RADIUS OF CURVATURE	SPECIFIC WEIGHT
1	6.0686	250.15	0.00	250.15	518.688	513.548	14.696	14.191	.2242	0.00	20.93	0.000	.0738
2	6.2267	250.15	0.00	250.15	518.688	513.548	14.696	14.191	.2242	0.00	19.77	0.000	.0738
3	6.3835	250.15	0.00	250.15	518.688	513.548	14.696	14.191	.2242	0.00	18.61	0.000	.0738
4	6.5392	250.15	0.00	250.15	518.688	513.548	14.696	14.191	.2242	0.00	17.44	0.000	.0738
5	6.6937	250.15	0.00	250.15	518.688	513.548	14.696	14.191	.2242	0.00	16.26	0.000	.0738
6	6.8472	250.15	0.00	250.15	518.688	513.548	14.696	14.191	.2242	0.00	15.07	0.000	.0738
7	6.9999	250.15	0.00	250.15	518.688	513.548	14.696	14.191	.2242	0.00	13.89	0.000	.0738
8	7.1518	250.15	0.00	250.15	518.688	513.548	14.696	14.191	.2242	0.00	12.71	0.000	.0738
9	7.3029	250.15	0.00	250.15	518.688	513.548	14.696	14.191	.2242	0.00	11.53	0.000	.0738
10	7.4535	250.15	0.00	250.15	518.688	513.548	14.696	14.191	.2242	0.00	10.36	0.000	.0738
11	7.6035	250.15	0.00	250.15	518.688	513.548	14.696	14.191	.2242	0.00	9.20	0.000	.0738
12	7.7531	250.15	0.00	250.15	518.688	513.548	14.696	14.191	.2242	0.00	8.05	0.000	.0738
13	7.9023	250.15	0.00	250.15	518.688	513.548	14.696	14.191	.2242	0.00	6.94	0.000	.0738
14	8.0512	250.15	0.00	250.15	518.688	513.548	14.696	14.191	.2242	0.00	5.85	0.000	.0738
15	8.1999	250.15	0.00	250.15	518.688	513.548	14.696	14.191	.2242	0.00	4.80	0.000	.0738
16	8.3484	250.15	0.00	250.15	518.688	513.548	14.696	14.191	.2242	0.00	3.80	0.000	.0738
17	8.4968	250.15	0.00	250.15	518.688	513.548	14.696	14.191	.2242	0.00	2.85	0.000	.0738
18	8.6451	250.15	0.00	250.15	518.688	513.548	14.696	14.191	.2242	0.00	2.00	0.000	.0738
19	8.7934	250.15	0.00	250.15	518.688	513.548	14.696	14.191	.2242	0.00	1.22	0.000	.0738
20	8.9417	250.15	0.00	250.15	518.688	513.548	14.696	14.191	.2242	0.00	.55	0.000	.0738
21	9.0900	250.15	0.00	250.15	518.688	513.548	14.696	14.191	.2242	0.00	0.00	0.000	.0738

STATION 2 FLOW FIELD DESCRIPTION

STREAM -LINE	RADIUS	------VELOCITIES------- MERID	TANGEN	TOTAL	--TEMPERATURES-- TOTAL	STATIC	---PRESSURES--- TOTAL	STATIC	MACH NO	---ANGLES--- WHIRL	SLOPE	RADIUS OF CURVATURE	SPECIFIC WEIGHT
1	6.3746	270.20	0.00	270.20	518.688	512.592	14.696	14.108	.2423	0.00	20.83	-205.758	.0735
2	6.5143	271.42	0.00	271.42	518.688	512.637	14.696	14.103	.2435	0.00	19.63	-143.697	.0735
3	6.6529	272.54	0.00	272.54	518.688	512.587	14.696	14.098	.2445	0.00	18.43	-117.285	.0735
4	6.7904	273.58	0.00	273.58	518.688	512.541	14.696	14.094	.2454	0.00	17.23	-101.946	.0735
5	6.9270	274.53	0.00	274.53	518.688	512.495	14.696	14.089	.2463	0.00	16.03	-91.183	.0735
6	7.0627	275.39	0.00	275.39	518.688	512.459	14.696	14.086	.2471	0.00	14.82	-82.371	.0734
7	7.1977	276.15	0.00	276.15	518.688	512.425	14.696	14.082	.2477	0.00	13.61	-74.442	.0734
8	7.3322	276.79	0.00	276.79	518.688	512.395	14.696	14.080	.2483	0.00	12.40	-66.978	.0734
9	7.4661	277.29	0.00	277.29	518.688	512.373	14.696	14.077	.2488	0.00	11.19	-59.870	.0734
10	7.5997	277.63	0.00	277.63	518.688	512.357	14.696	14.076	.2491	0.00	9.97	-53.135	.0734
11	7.7331	277.79	0.00	277.79	518.688	512.350	14.696	14.075	.2492	0.00	8.76	-46.829	.0734
12	7.8663	277.74	0.00	277.74	518.688	512.352	14.696	14.075	.2492	0.00	7.56	-41.000	.0734
13	7.9996	277.45	0.00	277.45	518.688	512.365	14.696	14.077	.2489	0.00	6.37	-35.682	.0734
14	8.1332	276.92	0.00	276.92	518.688	512.390	14.696	14.079	.2484	0.00	5.20	-30.890	.0734
15	8.2671	276.08	0.00	276.08	518.688	512.428	14.696	14.083	.2477	0.00	4.05	-26.621	.0734
16	8.4016	274.91	0.00	274.91	518.688	512.480	14.696	14.088	.2466	0.00	2.93	-22.862	.0735
17	8.5368	273.39	0.00	273.39	518.688	512.549	14.696	14.094	.2452	0.00	1.84	-19.587	.0735
18	8.6730	271.45	0.00	271.46	518.688	512.635	14.696	14.103	.2435	0.00	.80	-16.760	.0735
19	8.8104	269.09	0.00	269.09	518.688	512.741	14.696	14.113	.2413	0.00	-.18	-14.338	.0735
20	8.9493	266.23	0.00	266.23	518.688	512.867	14.696	14.125	.2387	0.00	-1.09	-12.274	.0736
21	9.0900	262.83	0.00	262.83	518.688	513.014	14.696	14.139	.2357	0.00	-1.91	-10.518	.0736

STATION 3 FLOW FIELD DESCRIPTION

STREAM -LINE	RADIUS	VELOCITIES MERID	VELOCITIES TANGEN	VELOCITIES TOTAL	TEMPERATURES TOTAL	TEMPERATURES STATIC	PRESSURES TOTAL	PRESSURES STATIC	MACH NO	ANGLES WHIRL	ANGLES SLOPE	RADIUS OF CURVATURE	SPECIFIC WEIGHT
1	6.6016	292.59	0.00	292.59	518.688	511.557	14.696	14.008	.2627	0.00	20.54	-83.031	.0732
2	6.7266	294.25	0.00	294.25	518.688	511.575	14.696	14.001	.2642	0.00	19.35	-122.112	.0731
3	6.8507	296.00	0.00	296.00	518.688	511.492	14.696	13.993	.2658	0.00	18.17	-183.929	.0731
4	6.9741	297.79	0.00	297.79	518.688	511.404	14.696	13.984	.2674	0.00	16.97	-265.615	.0731
5	7.0967	299.56	0.00	299.56	518.688	511.317	14.696	13.976	.2690	0.00	15.75	-323.428	.0730
6	7.2187	301.28	0.00	301.28	518.688	511.233	14.696	13.968	.2706	0.00	14.52	-297.599	.0730
7	7.3400	302.89	0.00	302.89	518.688	511.153	14.696	13.960	.2721	0.00	13.27	-221.647	.0730
8	7.4607	304.34	0.00	304.34	518.688	511.080	14.696	13.953	.2734	0.00	12.00	-154.925	.0729
9	7.5811	305.60	0.00	305.60	518.688	511.017	14.696	13.947	.2745	0.00	10.71	-110.041	.0729
10	7.7011	306.61	0.00	306.61	518.688	510.965	14.696	13.942	.2755	0.00	9.41	-81.121	.0729
11	7.8209	307.34	0.00	307.34	518.688	510.930	14.696	13.939	.2761	0.00	8.10	-62.832	.0729
12	7.9407	307.75	0.00	307.75	518.688	510.908	14.696	13.937	.2765	0.00	6.77	-48.842	.0729
13	8.0606	307.83	0.00	307.83	518.688	510.905	14.696	13.936	.2766	0.00	5.44	-39.219	.0729
14	8.1809	307.50	0.00	307.50	518.688	510.922	14.696	13.938	.2763	0.00	4.09	-31.865	.0729
15	8.3016	306.74	0.00	306.74	518.688	510.960	14.696	13.942	.2756	0.00	2.74	-26.067	.0729
16	8.4230	305.48	0.00	305.43	518.688	511.023	14.696	13.948	.2744	0.00	1.38	-21.421	.0729
17	8.5453	303.65	0.00	303.65	518.688	511.114	14.696	13.956	.2728	0.00	.01	-17.671	.0730
18	8.6689	301.21	0.00	301.21	518.688	511.235	14.696	13.968	.2705	0.00	-1.37	-14.639	.0730
19	8.7940	298.04	0.00	298.04	518.688	511.392	14.696	13.983	.2677	0.00	-2.75	-12.191	.0731
20	8.9209	294.08	0.00	294.08	518.688	511.585	14.696	14.001	.2640	0.00	-4.12	-10.232	.0731
21	9.0500	289.28	0.00	289.28	518.688	511.815	14.696	14.024	.2597	0.00	-5.47	-8.690	.0732

STATION 4 FLOW FIELD DESCRIPTION

STREAM -LINE	RADIUS	VELOCITIES MERID	VELOCITIES TANGEN	VELOCITIES TOTAL	TEMPERATURES TOTAL	TEMPERATURES STATIC	PRESSURES TOTAL	PRESSURES STATIC	MACH NO	ANGLES WHIRL	ANGLES SLOPE	RADIUS OF CURVATURE	SPECIFIC WEIGHT
1	6.7500	317.14	0.00	317.14	518.688	510.427	14.696	13.891	.2851	0.00	20.32	-388.054	.0727
2	6.8661	319.98	0.00	319.98	518.688	510.278	14.696	13.876	.2877	0.00	19.31	151.167	.0727
3	6.9813	323.02	0.00	323.02	518.688	510.115	14.696	13.861	.2904	0.00	18.23	82.997	.0726
4	7.0957	326.12	0.00	326.12	518.688	509.952	14.696	13.845	.2933	0.00	17.09	66.084	.0725
5	7.2092	329.19	0.00	329.19	518.688	509.787	14.696	13.830	.2961	0.00	15.90	60.373	.0725
6	7.3219	332.14	0.00	332.14	518.688	509.627	14.696	13.814	.2988	0.00	14.67	61.039	.0724
7	7.4338	334.92	0.00	334.92	518.688	509.475	14.696	13.800	.3013	0.00	13.38	68.416	.0724
8	7.5451	337.44	0.00	337.44	518.688	509.335	14.696	13.787	.3036	0.00	12.04	85.639	.0723
9	7.6558	339.66	0.00	339.66	518.688	509.212	14.696	13.775	.3057	0.00	10.67	126.782	.0723
10	7.7661	341.52	0.00	341.52	518.688	509.108	14.696	13.765	.3074	0.00	9.27	285.037	.0722
11	7.8762	343.00	0.00	343.00	518.688	509.025	14.696	13.757	.3087	0.00	7.86	-2048.317	.0722
12	7.9861	344.12	0.00	344.12	518.688	508.962	14.696	13.751	.3098	0.00	6.44	-279.655	.0722
13	8.0961	344.89	0.00	344.89	518.688	508.918	14.696	13.747	.3105	0.00	5.00	-156.385	.0722
14	8.2063	345.32	0.00	345.32	518.688	508.893	14.696	13.745	.3109	0.00	3.53	-102.294	.0722
15	8.3169	345.35	0.00	345.35	518.688	508.892	14.696	13.744	.3109	0.00	2.03	-69.716	.0722
16	8.4279	344.91	0.00	344.91	518.688	508.916	14.696	13.747	.3105	0.00	.48	-49.335	.0722
17	8.5397	343.93	0.00	343.93	518.688	508.972	14.696	13.752	.3096	0.00	-1.12	-36.151	.0722
18	8.6525	342.28	0.00	342.28	518.688	509.065	14.696	13.761	.3081	0.00	-2.78	-26.741	.0722
19	8.7665	339.00	0.00	339.00	518.688	509.204	14.696	13.774	.3058	0.00	-4.51	-19.608	.0723
20	8.8822	336.25	0.00	336.25	518.688	509.401	14.696	13.793	.3025	0.00	-6.33	-14.261	.0723
21	9.0000	331.27	0.00	331.27	518.688	509.674	14.696	13.819	.2980	0.00	-8.25	-10.317	.0724

BLADE DATA

LOCAT -ION	BLADE-ANGLES SECTION	LEAN	REL FLOW ANGLE	DEVIATION INCIDENCE	LOSS COEFF	BLADE SPEED	RELATIVE MACH NO	RELATIVE VELOCITY	RELATIVE PRESSURE	RELATIVE TEMPERATURE	PRESSURE RATIO	DELTA T ON T	ISENTROPIC EFFICIENCY	POLYTROPIC EFFICIENCY
1	-62.667	17.205	-72.125	-9.459	0.0000	983.4	.9288	1033.25	24.236	598.009	1.000	0.000	1.0000	1.0000
2	-62.592	16.455	-72.261	-9.670	0.0000	1000.3	.9442	1050.22	24.630	600.757	1.000	0.000	1.0000	1.0000
3	-62.589	15.442	-72.380	-9.791	0.0000	1017.1	.9595	1067.14	25.033	603.531	1.000	0.000	1.0000	1.0000
4	-62.652	14.158	-72.491	-9.839	0.0000	1033.7	.9748	1083.96	25.444	606.329	1.000	0.000	1.0000	1.0000
5	-62.713	12.772	-72.598	-9.885	0.0000	1050.3	.9900	1100.66	25.863	609.151	1.000	0.000	1.0000	1.0000
6	-62.747	11.442	-72.705	-9.958	0.0000	1066.7	1.0050	1117.21	26.291	611.996	1.000	0.000	1.0000	1.0000
7	-62.802	10.293	-72.816	-10.014	0.0000	1083.0	1.0199	1133.60	26.728	614.864	1.000	0.000	1.0000	1.0000
8	-62.907	9.371	-72.934	-10.027	0.0000	1099.2	1.0347	1149.84	27.174	617.759	1.000	0.000	1.0000	1.0000
9	-63.035	8.538	-73.063	-10.028	0.0000	1115.3	1.0493	1165.91	27.630	620.682	1.000	0.000	1.0000	1.0000
10	-63.159	7.673	-73.203	-10.044	0.0000	1131.4	1.0537	1181.83	28.096	623.636	1.000	0.000	1.0000	1.0000
11	-63.282	6.838	-73.357	-10.075	0.0000	1147.4	1.0780	1197.61	28.573	626.625	1.000	0.000	1.0000	1.0000
12	-63.412	6.146	-73.523	-10.112	0.0000	1163.5	1.0922	1213.28	29.063	629.653	1.000	0.000	1.0000	1.0000
13	-63.543	5.620	-73.701	-10.157	0.0000	1179.5	1.1063	1228.88	29.566	632.724	1.000	0.000	1.0000	1.0000
14	-63.665	5.227	-73.889	-10.224	0.0000	1195.5	1.1203	1244.41	30.083	635.842	1.000	0.000	1.0000	1.0000
15	-63.772	4.906	-74.091	-10.320	0.0000	1211.6	1.1342	1259.90	30.615	639.011	1.000	0.000	1.0000	1.0000
16	-63.867	4.561	-74.309	-10.442	0.0000	1227.8	1.1481	1275.35	31.164	642.238	1.000	0.000	1.0000	1.0000
17	-63.960	4.118	-74.547	-10.587	0.0000	1244.1	1.1519	1290.78	31.731	645.528	1.000	0.000	1.0000	1.0000
18	-64.069	3.586	-74.809	-10.739	0.0000	1260.5	1.1757	1306.18	32.318	648.890	1.000	0.000	1.0000	1.0000
19	-64.207	2.991	-75.101	-10.894	0.0000	1277.2	1.1894	1321.58	32.928	652.334	1.000	0.000	1.0000	1.0000
20	-64.353	2.386	-75.434	-11.081	0.0000	1294.0	1.2030	1336.98	33.563	655.873	1.000	0.000	1.0000	1.0000
21	-64.476	1.836	-75.821	-11.344	0.0000	1311.2	1.2165	1352.37	34.227	659.525	1.000	0.000	1.0000	1.0000

STATION 5 FLOW FIELD DESCRIPTION

STREAM -LINE	RADIUS	------VELOCITIES------- MERID	TANGEN	TOTAL	--TEMPERATURES-- TOTAL	STATIC	---PRESSURES--- TOTAL	STATIC	MACH NO	---ANGLES--- WHIRL	SLOPE	RADIUS OF CURVATURE	SPECIFIC WEIGHT
1	6.8979	351.14	106.05	366.81	536.189	525.143	16.439	15.280	.3251	16.81	22.32	6.199	.0777
2	7.0069	355.15	105.66	370.55	536.400	525.127	16.448	15.265	.3284	16.57	20.97	7.865	.0777
3	7.1142	358.64	105.35	373.79	536.619	525.145	16.457	15.255	.3313	16.37	19.50	10.896	.0776
4	7.2201	361.65	105.14	376.62	536.849	525.204	16.469	15.248	.3338	16.21	17.94	18.179	.0776
5	7.3247	364.62	105.21	379.50	537.125	525.301	16.486	15.247	.3363	16.10	16.31	56.410	.0776
6	7.4280	367.79	105.69	382.65	537.470	525.447	16.512	15.251	.3391	16.03	14.64	-54.300	.0776
7	7.5302	370.75	106.71	385.80	537.912	525.692	16.544	15.261	.3417	16.06	12.94	-19.138	.0776
8	7.6314	373.15	108.35	388.57	538.468	526.073	16.581	15.279	.3441	16.19	11.21	-11.963	.0776
9	7.7318	375.22	110.23	391.09	539.077	526.522	16.624	15.304	.3461	16.37	9.46	-8.898	.0777
10	7.8317	376.78	113.26	393.43	539.908	527.200	16.674	15.336	.3480	16.73	7.72	-7.240	.0777
11	7.9313	377.40	118.87	395.69	541.241	528.389	16.729	15.3[illegible]5	.3496	1[illegible].48	6.02	-6.253	.0777
12	8.0309	378.02	124.60	398.02	542.625	529.620	16.791	15.420	.3513	18.24	4.37	-5.654	.0778
13	8.1306	378.87	129.83	400.50	543.940	530.773	16.859	15.469	.3531	18.92	2.77	-5.316	.0779
14	8.2302	379.93	134.62	403.07	545.191	531.855	16.933	15.522	.3550	19.51	1.21	-5.186	.0780
15	8.3299	381.00	139.40	405.70	546.464	532.954	17.009	15.577	.3569	20.10	-.32	-5.251	.0781
16	8.4296	381.74	145.03	408.35	547.931	534.244	17.086	15.633	.3588	20.80	-1.82	-5.549	.0782
17	8.5297	382.25	150.69	410.88	549.432	535.576	17.161	15.688	.3606	21.51	-3.30	-6.186	.0783
18	8.6301	382.85	154.98	413.02	550.679	536.679	17.232	15.741	.3621	22.04	-4.76	-7.430	.0784
19	8.7308	383.47	158.01	414.74	551.584	537.568	17.294	15.789	.3633	22.39	-6.24	-10.087	.0785
20	8.8321	383.79	160.84	416.13	552.664	538.453	17.347	15.829	.3642	22.74	-7.78	-18.216	.0786
21	8.9340	383.89	163.74	417.35	553.677	539.383	17.387	15.860	.3650	23.10	-9.38	-1665.883	.0786

BLADE DATA

LOCAT -ION	BLADE-ANGLES SECTION	LEAN	REL FLOW ANGLE	DEVIATION INCIDENCE	LOSS COEFF	BLADE SPEED	RELATIVE MACH NO	RELATIVE VELOCITY	RELATIVE PRESSURE	RELATIVE TEMPERATURE	PRESSURE RATIO	DELTA T ON T	ISENTROPIC EFFICIENCY	POLYTROPIC EFFICIENCY
1	-60.252	10.492	-58.662	-8.410	.0105	1004.9	.8553	965.02	24.630	601.518	1.119	.034	.9612	.9618
2	-60.396	9.957	-58.789	-8.393	.0124	1020.8	.8700	981.64	24.990	604.152	1.119	.034	.9542	.9549
3	-60.557	9.012	-58.934	-8.377	.0140	1035.4	.8843	997.76	25.355	606.786	1.120	.035	.9476	.9484
4	-60.731	7.774	-59.093	-8.362	.0155	1051.9	.8981	1013.44	25.725	609.423	1.121	.035	.9415	.9425
5	-60.891	6.537	-59.240	-8.349	.0168	1067.1	.9115	1028.68	26.100	612.067	1.122	.036	.9362	.9372
6	-61.024	5.436	-59.361	-8.336	.0179	1082.2	.9245	104[illegible]43	26.481	614.715	1.124	.036	.9315	.9326
7	-61.151	4.692	-59.475	-8.325	.0195	1097.0	.9367	1057.46	26.861	617.370	1.126	.037	.9255	.9267
8	-61.287	4.130	-59.601	-8.314	.0220	1111.5	.9480	1070.58	27.234	620.334	1.128	.038	.9168	.9182
9	-61.429	3.703	-59.734	-8.305	.0243	1125.4	.9589	1083.24	27.613	622.714	1.131	.039	.9090	.9105
10	-61.569	3.232	-59.866	-8.297	.0285	1141.0	.9682	1094.59	27.970	625.412	1.135	.041	.8949	.8968
11	-61.705	2.832	-59.995	-8.290	.0383	1155.5	.9747	1103.17	28.250	628.139	1.138	.043	.8644	.8668
12	-61.836	2.391	-70.120	-8.284	.0475	1170.0	.9811	1111.64	28.539	630.899	1.143	.046	.8381	.8411
13	-61.951	2.033	-70.240	-8.279	.0548	1184.5	.9880	1120.66	28.859	633.594	1.147	.049	.8191	.8226
14	-62.080	1.791	-70.357	-8.276	.0607	1199.0	.9953	1130.18	29.206	636.523	1.152	.051	.8055	.8094
15	-62.195	1.697	-70.470	-8.275	.0662	1213.5	1.0027	1139.71	29.562	639.387	1.157	.054	.7935	.7977
16	-62.309	1.705	-70.594	-8.275	.0735	1228.1	1.0091	1148.35	29.892	642.287	1.163	.056	.7775	.7822
17	-62.429	1.776	-70.707	-8.278	.0812	1242.5	1.0154	1156.94	30.220	645.230	1.158	.059	.7616	.7668
18	-62.565	1.833	-70.847	-8.282	.0864	1257.3	1.0231	1165.89	30.598	648.218	1.173	.062	.7516	.7572
19	-62.717	1.832	-71.004	-8.287	.0895	1272.0	1.0321	1178.10	31.019	651.251	1.177	.064	.7457	.7515
20	-62.883	1.740	-71.176	-8.294	.0934	1286.7	1.0412	1189.48	31.440	654.334	1.180	.066	.7379	.7440
21	-63.056	1.594	-71.356	-8.300	.0984	1301.6	1.0502	1200.83	31.844	657.473	1.183	.067	.7269	.7333

STATION 5 INTEGRATED PERFORMANCE PRESSURE RATIO = 1.146 ISEN. EFF.= .828 POLY. EFF.= .831 DELTA T ON T = .048

STATION 6 FLOW FIELD DESCRIPTION

STREAM -LINE	RADIUS	VELOCITIES MERID	TANGEN	TOTAL	TEMPERATURES TOTAL	STATIC	PRESSURES TOTAL	STATIC	MACH NO	ANGLES WHIRL	SLOPE	RADIUS OF CURVATURE	SPECIFIC WEIGHT
1	7.0734	393.09	263.52	473.24	563.295	544.321	19.465	17.323	.4113	33.84	27.37	4.302	.0849
2	7.1726	398.87	258.90	475.53	563.096	544.544	19.407	17.252	.4139	32.99	24.97	5.240	.0847
3	7.2640	403.94	254.84	477.61	562.960	544.245	19.359	17.190	.4158	32.25	22.54	6.511	.0844
4	7.3547	407.95	251.01	478.99	562.835	544.013	19.314	17.138	.4171	31.60	20.08	8.310	.0842
5	7.4434	411.23	247.47	479.95	562.739	543.840	19.274	17.093	.4180	31.04	17.62	11.085	.0840
6	7.5309	414.25	244.46	481.01	562.714	543.731	19.243	17.057	.4190	30.54	15.17	15.990	.0838
7	7.6175	417.14	242.59	482.55	562.880	543.775	19.227	17.030	.4203	30.18	12.76	26.773	.0837
8	7.7035	419.62	242.17	484.48	563.301	544.044	19.224	17.011	.4219	29.99	10.40	66.880	.0835
9	7.7891	421.89	242.21	486.47	563.805	544.389	19.231	17.003	.4235	29.86	8.11	-250.784	.0835
10	7.8746	423.03	244.53	488.62	564.735	545.145	19.248	17.003	.4251	30.03	5.88	-48.881	.0833
11	7.9605	421.69	252.42	491.47	566.739	546.324	19.278	17.011	.4269	30.90	3.77	-28.840	.0831
12	8.0472	420.39	260.60	494.61	568.834	548.765	19.319	17.028	.4289	31.79	1.80	-21.531	.0829
13	8.1348	419.71	267.66	497.79	570.752	550.427	19.369	17.051	.4310	32.53	-.03	-18.033	.0828
14	8.2233	419.54	273.75	500.95	572.513	551.930	19.426	17.079	.4331	33.12	-1.70	-16.249	.0827
15	8.3124	419.42	279.97	504.23	574.332	553.475	19.439	17.113	.4354	33.72	-3.24	-15.502	.0826
16	8.4025	418.31	288.52	508.15	576.650	555.473	19.561	17.150	.4380	34.59	-4.62	-15.687	.0825
17	8.4936	416.75	297.65	512.13	579.131	557.624	19.638	17.191	.4405	35.54	-5.82	-17.093	.0824
18	8.5859	415.88	304.20	515.25	581.129	559.353	19.710	17.234	.4426	36.18	-6.87	-20.464	.0823
19	8.6790	415.54	308.48	517.53	582.692	560.732	19.777	17.277	.4440	36.59	-7.80	-27.972	.0823
20	8.7729	414.60	313.21	519.61	584.376	562.240	19.840	17.320	.4452	37.07	-8.64	-51.348	.0823
21	8.8679	412.75	319.12	521.74	586.338	564.022	19.899	17.360	.4453	37.71	-9.38	1665.883	.0822

BLADE DATA

LOCAT -ION	BLADE-ANGLES SECTION	LEAN	REL FLOW ANGLE	DEVIATION INCIDENCE	LOSS COEFF	BLADE SPEED	RELATIVE MACH NO	RELATIVE VELOCITY	RELATIVE PRESSURE	RELATIVE TEMPERATURE	PRESSURE RATIO	DELTA T ON T	ISENTROPIC EFFICIENCY	POLYTROPIC EFFICIENCY
1	-54.590	3.782	-52.886	-8.295	.0215	1031.2	.7505	862.49	25.158	605.303	1.324	.086	.9683	.9696
2	-54.779	3.264	-53.095	-8.313	.0251	1044.9	.7573	881.46	25.457	608.236	1.321	.086	.9621	.9635
3	-54.977	2.509	-53.311	-8.333	.0282	1058.3	.7830	899.33	25.757	610.543	1.317	.085	.9560	.9577
4	-55.213	1.571	-53.562	-8.349	.0311	1071.5	.7980	916.29	26.058	612.332	1.314	.085	.9503	.9521
5	-55.470	.636	-53.832	-8.362	.0336	1084.4	.8122	932.49	26.362	615.111	1.311	.085	.9448	.9469
6	-55.714	-.102	-54.088	-8.374	.0353	1097.1	.8258	947.99	26.669	617.388	1.309	.085	.9396	.9419
7	-55.926	-.557	-54.311	-8.385	.0390	1109.8	.8382	962.30	26.967	619.568	1.308	.085	.9330	.9355
8	-56.115	-.786	-54.510	-8.395	.0439	1122.3	.8491	975.04	27.243	621.356	1.308	.086	.9236	.9265
9	-56.298	-.851	-54.701	-8.403	.0484	1134.8	.8594	987.24	27.524	624.258	1.309	.087	.9147	.9179
10	-56.481	-.823	-54.890	-8.409	.0569	1147.2	.8673	995.89	27.751	626.582	1.310	.089	.8993	.9030
11	-56.658	-.778	-55.072	-8.415	.0764	1159.7	.8690	1000.51	27.816	628.343	1.312	.093	.8668	.8718
12	-56.828	-.792	-55.247	-8.419	.0948	1172.4	.8705	1004.01	27.889	631.354	1.315	.097	.8374	.8435
13	-56.996	-.842	-55.415	-8.421	.1095	1185.1	.8735	1008.91	28.014	633.315	1.318	.100	.8144	.8215
14	-57.164	-.809	-55.586	-8.422	.1212	1198.0	.8776	1015.02	28.183	636.324	1.322	.104	.7964	.8043
15	-57.327	-.575	-55.749	-8.422	.1324	1211.0	.8817	1021.14	28.360	638.582	1.326	.107	.7797	.7883
16	-57.491	-.137	-55.910	-8.420	.1473	1224.1	.8833	1024.86	28.472	641.494	1.331	.112	.7587	.7683
17	-57.568	.425	-56.064	-8.416	.1627	1237.4	.8843	1028.01	28.570	644.166	1.336	.117	.7379	.7484
18	-57.871	1.031	-56.283	-8.412	.1731	1250.8	.8881	1033.96	28.757	646.599	1.341	.120	.7237	.7349
19	-58.099	1.601	-56.505	-8.407	.1795	1264.4	.8942	1042.33	29.019	649.586	1.346	.123	.7145	.7261
20	-58.345	2.058	-56.747	-8.402	.1870	1278.1	.8997	1050.18	29.265	652.329	1.350	.127	.7039	.7161
21	-58.508	2.366	-57.008	-8.400	.1968	1291.9	.9039	1056.75	29.466	655.434	1.354	.130	.6905	.7034

STATION 6 INTEGRATED PERFORMANCE PRESSURE RATIO = 1.323 ISEN. EFF.= .825 POLY. EFF.= .831 DELTA T ON T = .101

STATION 7 FLOW FIELD DESCRIPTION

STREAM -LINE	RADIUS	------VELOCITIES------ MERID	TANGEN	TOTAL	--TEMPERATURES-- TOTAL	STATIC	---PRESSURE--- TOTAL	STATIC	MACH NO	---ANGLES--- WHIRL	SLOPE	RADIUS OF CURVATURE	SPECIFIC WEIGHT
1	7.3120	500.07	394.60	637.00	587.659	554.388	22.494	18.325	.5496	38.28	26.61	-3.372	.0883
2	7.3794	499.49	393.12	635.64	588.035	554.307	22.488	18.340	.5481	38.20	23.74	-3.385	.0883
3	7.4462	499.05	392.60	634.96	588.568	555.511	22.506	18.365	.5473	38.19	20.95	-3.454	.0883
4	7.5126	498.34	392.45	634.32	589.163	556.174	22.534	18.400	.5464	38.22	18.24	-3.585	.0884
5	7.5787	497.08	392.27	633.22	589.752	556.875	22.563	18.441	.5451	38.28	15.60	-3.782	.0885
6	7.6449	495.45	392.11	631.85	590.342	557.511	22.595	18.488	.5435	38.36	13.04	-4.045	.0886
7	7.7114	493.29	392.80	630.58	591.090	558.492	22.631	18.538	.5420	38.53	10.55	-4.368	.0887
8	7.7783	490.48	395.08	629.81	592.142	559.525	22.677	18.591	.5408	38.85	8.15	-4.744	.0888
9	7.8458	488.07	397.77	629.63	593.281	560.784	22.735	18.648	.5401	39.18	5.85	-5.176	.0889
10	7.9141	484.07	403.81	630.39	595.073	562.499	22.807	18.709	.5399	39.84	3.63	-5.672	.0889
11	7.9840	474.88	418.71	633.11	598.585	565.733	22.898	18.774	.5407	41.40	1.54	-6.236	.0887
12	8.0561	465.75	433.98	636.60	602.239	569.029	23.005	18.843	.5422	42.98	-.40	-6.867	.0885
13	8.1302	457.94	447.21	640.08	605.574	572.004	23.119	18.915	.5437	44.32	-2.18	-7.568	.0884
14	8.2064	451.31	458.56	643.40	608.610	574.695	23.237	18.990	.5453	45.46	-3.79	-8.328	.0883
15	8.2846	444.77	470.04	647.11	611.733	577.429	23.363	19.068	.5471	46.58	-5.24	-9.144	.0882
16	8.3650	435.83	489.84	652.72	615.785	580.890	23.514	19.149	.5502	48.10	-6.50	-10.111	.0881
17	8.4481	426.32	503.08	659.42	620.222	584.513	23.685	19.233	.5541	49.72	-7.50	-11.567	.0879
18	8.5337	419.37	515.75	664.73	623.824	587.545	23.844	19.320	.5571	50.88	-8.25	-14.228	.0878
19	8.6213	414.65	524.21	668.39	626.641	590.067	23.985	19.407	.5591	51.66	-8.80	-19.715	.0879
20	8.7109	409.13	533.80	672.55	629.746	592.713	24.131	19.493	.5613	52.53	-9.19	-35.791	.0879
21	8.8019	401.84	546.00	677.93	633.467	595.852	24.288	19.576	.5643	53.65	-9.37	*956875.344	.0878

BLADE DATA

LOCAT -ION	BLADE-ANGLES SECTION	BLADE-ANGLES LEAN	REL FLOW ANGLE	DEVIATION INCIDENCE	LOSS COEFF	BLADE SPEED	RELATIVE MACH NO	RELATIVE VELOCITY	RELATIVE PRESSURE	RELATIVE TEMPERATURE	PRESSURE RATIO	DELTA T ON T	ISENTROPIC EFFICIENCY	POLYTROPIC EFFICIENCY
1	-42.577	-5.962	-53.290	-10.713	.0331	1065.3	.7217	836.57	25.911	611.744	1.531	.133	.9683	.9701
2	-43.119	-5.849	-53.779	-10.661	.0382	1075.1	.7289	845.30	26.103	613.464	1.530	.134	.9624	.9645
3	-43.604	-5.704	-54.210	-10.605	.0429	1084.8	.7355	853.34	26.298	615.184	1.531	.135	.9569	.9594
4	-44.079	-5.507	-54.630	-10.552	.0473	1094.5	.7415	860.92	26.498	616.908	1.533	.136	.9518	.9546
5	-44.573	-5.238	-55.073	-10.500	.0505	1104.1	.7474	868.22	26.702	618.643	1.535	.137	.9469	.9500
6	-45.076	-4.891	-55.528	-10.452	.0539	1113.8	.7530	875.36	26.912	620.393	1.537	.138	.9424	.9457
7	-45.565	-4.459	-55.975	-10.409	.0585	1123.4	.7579	881.57	27.107	622.165	1.540	.140	.9363	.9401
8	-46.022	-3.936	-56.395	-10.373	.0657	1133.2	.7610	886.20	27.268	623.965	1.543	.142	.9275	.9318
9	-46.434	-3.338	-56.779	-10.345	.0725	1143.0	.7642	890.85	27.436	625.796	1.547	.144	.9198	.9239
10	-46.805	-2.721	-57.131	-10.325	.0853	1153.0	.7640	891.95	27.519	627.666	1.552	.147	.9043	.9100
11	-47.149	-2.147	-57.466	-10.318	.1144	1163.2	.7542	883.01	27.358	629.595	1.558	.154	.8729	.8886
12	-47.482	-1.631	-57.803	-10.320	.1420	1173.7	.7444	874.09	27.207	631.501	1.565	.161	.8440	.8535
13	-47.818	-1.312	-58.154	-10.335	.1642	1184.5	.7372	867.90	27.128	633.584	1.573	.168	.8211	.8321
14	-48.155	-.956	-58.518	-10.363	.1818	1195.6	.7324	864.20	27.113	635.944	1.581	.173	.8028	.8150
15	-48.482	-.515	-58.886	-10.404	.1987	1205.9	.7277	860.72	27.107	638.080	1.590	.179	.7856	.7990
16	-48.796	.065	-59.255	-10.459	.2212	1218.7	.7188	852.66	26.999	640.404	1.600	.187	.7640	.7790
17	-49.106	.747	-59.636	-10.530	.2444	1230.8	.7087	843.37	26.871	642.326	1.612	.196	.7425	.7591
18	-49.420	1.472	-60.038	-10.619	.2501	1243.2	.7039	839.71	26.874	645.350	1.622	.203	.7278	.7456
19	-49.737	2.103	-60.462	-10.725	.2697	1256.0	.7035	841.10	26.988	647.954	1.632	.208	.7180	.7366
20	-50.054	2.731	-60.905	-10.850	.2803	1269.0	.7022	841.37	27.075	650.538	1.642	.214	.7072	.7267
21	-50.376	3.033	-61.377	-11.000	.2952	1282.3	.6983	838.82	27.095	653.412	1.653	.221	.6938	.7144

STATION 7 INTEGRATED PERFORMANCE PRESSURE RATIO = 1.575 ISEN. EFF.= .827 POLY. EFF.= .838 DELTA T ON T = .157

STATION 8 FLOW FIELD DESCRIPTION

STREAM -LINE	RADIUS	VELOCITIES MERID	VELOCITIES TANGEN	VELOCITIES TOTAL	TEMPERATURES TOTAL	TEMPERATURES STATIC	PRESSURES TOTAL	PRESSURES STATIC	MACH NO	ANGLES WHIRL	ANGLES SLOPE	RADIUS OF CURVATURE	SPECIFIC WEIGHT
1	7.4792	641.62	549.41	844.70	516.861	558.395	26.579	18.722	.7261	40.57	16.56	-1.883	.0896
2	7.5245	629.39	548.80	835.05	517.346	560.212	26.565	18.875	.7167	41.09	14.57	-2.146	.0900
3	7.5703	618.60	548.31	826.63	517.865	561.879	26.558	19.012	.7084	41.55	12.66	-2.473	.0904
4	7.6183	609.24	547.93	819.39	518.414	563.407	26.559	19.135	.7013	41.97	10.83	-2.885	.0907
5	7.6657	601.21	547.63	813.24	518.993	564.811	26.567	19.245	.6951	42.33	9.04	-3.414	.0910
6	7.7162	594.35	547.41	808.03	619.593	566.110	26.581	19.345	.6899	42.65	7.31	-4.115	.0913
7	7.7666	587.64	548.08	803.57	520.381	567.485	26.597	19.435	.6853	43.01	5.61	-5.086	.0915
8	7.8182	580.19	550.35	799.69	521.478	569.093	26.609	19.517	.6810	43.49	3.94	-6.519	.0916
9	7.8711	573.51	552.63	796.44	522.599	570.542	26.625	19.591	.6773	43.94	2.32	-8.826	.0917
10	7.9253	563.63	558.35	793.90	524.488	572.369	26.637	19.659	.6739	44.74	.72	-13.012	.0917
11	7.9819	544.35	576.67	793.02	528.633	577.137	26.651	19.724	.6706	46.65	-.83	-21.884	.0913
12	8.0416	524.95	595.80	794.07	533.118	581.495	26.701	19.790	.6690	48.62	-2.31	-48.509	.0909
13	8.1044	508.44	613.15	796.53	537.359	585.425	26.788	19.857	.6689	50.33	-3.70	-159[illegible].015	.0906
14	8.1702	494.51	628.70	799.88	541.347	588.384	26.902	19.928	.6697	51.81	-5.00	67.505	.0904
15	8.2390	480.55	645.07	804.39	545.588	592.543	27.045	20.004	.6714	53.32	-6.20	38.253	.0902
16	8.3114	460.90	668.66	812.11	551.367	597.414	27.247	20.089	.6751	55.42	-7.26	32.777	.0898
17	8.3884	438.81	695.93	822.72	558.037	602.680	27.519	20.187	.6810	57.77	-8.21	40.680	.0895
18	8.4699	422.41	717.61	832.70	563.756	607.863	27.816	20.302	.6868	59.52	-8.92	86.583	.0894
19	8.5551	411.65	734.06	841.61	568.557	610.557	28.125	20.432	.6921	60.72	-9.42	-365.485	.0894
20	8.6435	399.43	754.15	853.40	574.229	614.711	28.506	20.574	.6995	62.09	-9.65	-86.797	.0894
21	8.7359	382.93	780.23	859.14	581.300	619.585	28.976	20.725	.7096	63.86	-9.37	*616564.766	.0894

BLADE DATA

LOCAT -ION	BLADE-ANGLES SECTION	LEAN	REL FLOW ANGLE	DEVIATION INCIDENCE	LOSS COEFF	BLADE SPEED	RELATIVE MACH NO	RELATIVE VELOCITY	RELATIVE PRESSURE	RELATIVE TEMPERATURE	PRESSURE RATIO	DELTA T ON T	ISENTROPIC EFFICIENCY	POLYTROPIC EFFICIENCY
1	-25.429	-6.276	-40.095	-14.666	.0439	1089.6	.7210	838.75	26.455	616.040	1.809	.189	.9697	.9721
2	-25.481	-5.918	-41.015	-14.534	.0507	1095.2	.7159	834.14	26.546	617.221	1.808	.190	.9640	.9658
3	-27.475	-5.439	-41.880	-14.405	.0568	1103.0	.7120	830.85	26.645	618.437	1.807	.191	.9585	.9618
4	-28.405	-4.851	-42.687	-14.282	.0622	1109.9	.7094	828.83	26.752	619.587	1.807	.192	.9532	.9569
5	-29.274	-4.180	-43.438	-14.165	.0671	1116.9	.7077	827.98	26.868	620.373	1.808	.193	.9483	.9524
6	-30.083	-3.455	-44.137	-14.054	.0715	1124.1	.7071	828.17	26.991	622.293	1.809	.195	.9435	.9480
7	-30.840	-2.712	-44.792	-13.953	.0777	1131.5	.7062	828.06	27.094	623.550	1.810	.196	.9372	.9422
8	-31.554	-1.934	-45.415	-13.860	.0873	1139.0	.7039	826.52	27.151	625.146	1.811	.198	.9280	.9337
9	-32.229	-1.294	-46.008	-13.779	.0964	1146.7	.7022	825.73	27.215	626.485	1.812	.200	.9189	.9254
10	-32.864	-.649	-46.574	-13.710	.1135	1154.6	.6963	820.30	27.165	627.974	1.813	.204	.9032	.9110
11	-33.463	-.054	-47.119	-13.656	.1524	1162.8	.6765	799.95	26.786	629.536	1.813	.212	.8699	.8883
12	-34.028	.478	-47.642	-13.615	.1893	1171.5	.6565	779.13	26.417	631.196	1.817	.221	.8367	.8515
13	-34.556	.931	-48.145	-13.588	.2183	1180.7	.6399	761.99	26.142	632.357	1.823	.229	.8134	.8284
14	-35.057	1.315	-48.634	-13.578	.2425	1190.3	.6265	748.28	25.949	634.516	1.831	.236	.7929	.8096
15	-35.541	1.655	-49.124	-13.584	.2652	1200.3	.6129	734.31	25.764	636.774	1.840	.245	.7736	.7920
16	-36.027	1.988	-49.633	-13.606	.2954	1210.8	.5916	711.61	25.444	638.853	1.854	.256	.7497	.7702
17	-36.524	2.334	-50.171	-13.646	.3265	1222.1	.5571	685.11	25.097	641.083	1.873	.269	.7263	.7491
18	-37.008	2.674	-50.714	-13.706	.3474	1233.9	.5502	667.11	24.929	643.469	1.893	.280	.7106	.7350
19	-37.432	2.977	-51.216	-13.784	.3591	1246.4	.5405	657.20	24.913	645.385	1.914	.289	.7008	.7264
20	-37.782	3.210	-51.663	-13.881	.3747	1259.2	.5278	643.94	24.863	648.521	1.940	.300	.6905	.7175
21	-38.132	3.347	-52.132	-14.000	.3935	1272.7	.5094	623.63	24.729	651.405	1.972	.314	.6783	.7070

STATION 8 INTEGRATED PERFORMANCE PRESSURE RATIO = 1.842 ISEN. EFF.= .820 POLY. EFF.= .834 DELTA T ON T = .231

STATION 9 FLOW FIELD DESCRIPTION

STREAM -LINE	RADIUS	VELOCITIES MERID	VELOCITIES TANGEN	VELOCITIES TOTAL	TEMPERATURES TOTAL	TEMPERATURES STATIC	PRESSURES TOTAL	PRESSURES STATIC	MACH NO	ANGLES WHIRL	ANGLES SLOPE	RADIUS OF CURVATURE	SPECIFIC WEIGHT
1	7.5499	673.51	693.13	966.46	643.644	567.168	30.761	19.703	.8244	45.82	8.54	-5.825	.0928
2	7.5874	665.13	690.80	958.95	643.841	568.551	30.657	19.791	.8170	46.08	7.93	-9.049	.0930
3	7.6260	658.21	688.36	952.41	644.033	569.770	30.575	19.859	.8106	46.28	7.29	-17.093	.0931
4	7.6655	652.63	685.80	946.71	644.215	570.840	30.486	19.913	.8050	46.42	6.60	-76.101	.0932
5	7.7061	648.25	683.15	941.77	644.390	571.780	30.399	19.952	.8001	46.50	5.90	36.349	.0932
6	7.7475	644.98	680.40	937.52	644.559	572.603	30.314	19.979	.7960	46.53	5.16	15.390	.0932
7	7.7899	640.92	677.89	932.91	644.780	573.534	30.200	19.994	.7914	46.61	4.41	9.962	.0931
8	7.8334	634.41	675.86	926.96	645.103	574.764	30.032	19.997	.7855	46.81	3.65	7.458	.0930
9	7.8781	628.64	673.74	921.47	645.425	575.920	29.864	19.991	.7801	46.98	2.86	6.013	.0927
10	7.9242	619.04	677.45	917.69	646.866	577.934	29.710	19.976	.7756	47.58	2.06	5.066	.0924
11	7.9725	596.13	697.90	917.84	651.524	582.585	29.595	19.956	.7726	49.50	1.23	4.407	.0915
12	8.0238	571.09	718.58	917.88	656.326	587.397	29.476	19.936	.7695	51.52	.36	3.952	.0907
13	8.0785	549.87	737.68	920.07	660.933	591.689	29.422	19.918	.7686	53.30	-.53	3.646	.0899
14	8.1365	532.49	755.33	924.15	665.365	595.519	29.428	19.904	.7695	54.82	-1.46	3.436	.0893
15	8.1977	513.44	773.05	928.02	669.919	599.502	29.433	19.895	.7702	56.41	-2.40	3.298	.0887
16	8.2628	492.25	811.10	948.79	678.589	605.014	29.827	19.897	.7639	58.75	-3.39	3.215	.0879
17	8.3327	464.80	855.21	973.36	688.669	611.267	30.330	19.918	.8001	61.48	-4.44	3.198	.0871
18	8.4081	441.30	887.02	990.73	696.551	616.390	30.738	19.962	.8110	63.55	-5.54	3.313	.0865
19	8.4885	423.58	907.57	1001.55	702.385	620.487	31.034	20.030	.8172	64.98	-6.65	3.657	.0863
20	8.5746	398.02	931.13	1012.63	709.032	625.339	31.373	20.129	.8230	66.86	-7.76	4.718	.0860
21	8.6699	354.75	961.17	1024.55	717.312	631.6[illegible]	31.794	20.286	.8286	69.74	-8.95	20.749	.0858

BLADE DATA

LOCAT -ION	BLADE-ANGLES SECTION	BLADE-ANGLES LEAN	REL FLOW ANGLE	DEVIATION INCIDENCE	LOSS COEFF	BLADE SPEED	RELATIVE MACH NO	RELATIVE VELOCITY	RELATIVE PRESSURE	RELATIVE TEMPERATURE	PRESSURE RATIO	DELTA T ON T	ISENTROPIC EFFICIENCY	POLYTROPIC EFFICIENCY
1	-11.816	2.399	-31.130	-19.314	.0540	1099.9	.6712	785.82	26.635	617.385	2.093	.241	.9697	.9727
2	-12.759	2.631	-31.935	-19.177	.0625	1105.4	.6678	783.75	26.675	618.371	2.087	.241	.9638	.9673
3	-13.719	2.839	-32.704	-18.985	.0702	1111.0	.6657	782.21	26.721	619.390	2.081	.242	.9579	.9628
4	-14.682	3.103	-33.438	-18.756	.0771	1116.8	.6659	782.08	26.776	620.341	2.074	.242	.9523	.9569
5	-15.632	3.382	-34.137	-18.505	.0833	1122.7	.6554	783.21	26.838	622.023	2.069	.242	.9469	.9520
6	-15.552	3.662	-34.801	-18.250	.0889	1128.7	.6569	785.48	26.907	623.136	2.063	.243	.9415	.9472
7	-17.423	3.928	-35.490	-19.066	.0967	1134.9	.6679	787.16	26.948	624.280	2.055	.243	.9345	.9408
8	-18.234	4.164	-35.261	-18.028	.1089	1141.2	.6567	786.79	26.929	625.460	2.044	.244	.9241	.9313
9	-18.980	4.366	-37.016	-18.035	.1203	1147.7	.6565	787.31	26.915	626.579	2.032	.244	.9138	.9219
10	-19.571	4.536	-37.615	-17.944	.1417	1154.4	.6605	781.50	26.756	627.343	2.022	.247	.8962	.9059
11	-20.321	4.678	-37.971	-17.549	.1904	1161.5	.6357	755.16	26.181	629.275	2.014	.256	.8594	.8725
12	-20.945	4.793	-38.260	-17.315	.2365	1169.0	.6097	727.31	25.612	630.701	2.006	.265	.8241	.8403
13	-21.553	4.883	-38.618	-17.066	.2737	1176.9	.5879	703.77	25.156	632.230	2.002	.274	.7958	.8138
14	-22.141	4.943	-38.924	-16.783	.3034	1185.4	.5599	684.45	24.797	633.360	2.002	.283	.7711	.7921
15	-22.703	4.960	-39.366	-16.663	.3317	1194.3	.5512	664.13	24.446	635.596	2.003	.292	.7461	.7711
16	-23.230	4.919	-38.579	-15.349	.3695	1203.8	.5202	629.68	23.918	637.455	2.030	.308	.7223	.7482
17	-23.715	4.796	-37.662	-13.947	.4084	1213.9	.4825	587.14	23.350	639.468	2.064	.328	.6973	.7261
18	-24.148	4.578	-37.442	-13.294	.4345	1224.9	.4550	555.82	22.999	641.558	2.092	.343	.6797	.7105
19	-24.511	4.286	-37.845	-13.333	.4585	1236.7	.4375	536.39	22.839	644.316	2.112	.354	.6675	.6999
20	-24.738	3.952	-38.628	-13.840	.4687	1249.2	.4141	509.49	22.644	646.563	2.135	.367	.6544	.6885
21	-24.964	3.617	-40.399	-15.435	.4921	1263.1	.3767	465.83	22.368	649.413	2.163	.383	.6393	.6754

STATION 9 INTEGRATED PERFORMANCE PRESSURE RATIO = 2.056 ISEN. EFF.= .802 POLY. EFF.= .821 DELTA T ON T = .283

STATION 10 FLOW FIELD DESCRIPTION

STREAM -LINE	RADIUS	VELOCITIES MERID	VELOCITIES TANGEN	VELOCITIES TOTAL	TEMPERATURES TOTAL	TEMPERATURES STATIC	PRESSURES TOTAL	PRESSURES STATIC	MACH NO	ANGLES WHIRL	ANGLES SLOPE	RADIUS OF CURVATURE	SPECIFIC WEIGHT
1	7.5746	692.15	690.87	977.95	543.644	565.336	30.761	19.480	.8356	44.95	7.82	9.349	.0921
2	7.6150	694.28	688.30	977.64	543.841	565.584	30.667	19.430	.8351	44.75	7.67	11.318	.0918
3	7.6559	696.60	685.66	977.44	544.033	565.805	30.575	19.378	.8348	44.55	7.45	13.086	.0915
4	7.6973	698.94	682.97	977.22	644.215	566.025	30.486	19.328	.8344	44.34	7.19	14.484	.0912
5	7.7390	701.10	680.24	976.87	544.390	566.259	30.399	19.283	.8340	44.14	6.90	15.329	.0910
6	7.7809	702.88	677.43	976.23	544.559	566.529	30.314	19.243	.8332	43.95	6.59	15.679	.0908
7	7.8231	702.55	675.02	974.28	644.780	567.063	30.200	19.211	.8312	43.85	6.27	15.643	.0905
8	7.8657	698.67	673.08	970.15	545.103	568.047	30.032	19.188	.8269	43.93	5.94	15.296	.0903
9	7.9090	694.24	671.11	965.53	545.425	569.094	29.864	19.170	.8223	44.03	5.60	14.696	.0900
10	7.9531	685.37	674.99	961.95	546.866	571.114	29.710	19.159	.8178	44.56	5.24	13.926	.0896
11	7.9988	664.03	695.60	961.66	551.524	575.834	29.595	19.154	.8142	46.33	4.86	13.010	.0889
12	8.0469	640.15	716.52	960.83	656.326	580.784	29.476	19.157	.8100	48.22	4.41	11.979	.0881
13	8.0974	618.93	735.96	961.62	660.933	585.284	29.422	19.169	.8076	49.94	3.85	10.952	.0875
14	8.1502	600.13	754.04	963.74	665.365	589.397	29.428	19.193	.8066	51.48	3.27	10.027	.0870
15	8.2056	578.87	772.29	965.15	669.919	593.744	29.433	19.230	.8048	53.15	2.55	9.244	.0865
16	8.2640	554.51	810.97	992.42	678.589	599.595	29.827	19.287	.8152	55.64	1.68	8.585	.0859
17	8.3265	523.01	855.83	1002.99	688.669	606.473	30.338	19.373	.8276	58.57	.62	7.994	.0854
18	8.3942	493.08	886.49	1016.13	696.551	612.210	30.738	19.490	.8346	60.97	-.70	7.417	.0851
19	8.4676	466.75	909.81	1022.55	702.385	617.008	31.034	19.637	.8356	62.84	-2.26	6.738	.0858
20	8.5433	433.41	934.00	1029.65	709.832	622.494	31.373	19.809	.8388	65.11	-4.06	5.521	.0850
21	8.6399	390.14	964.51	1040.43	717.312	628.394	31.794	19.984	.8432	67.98	-6.18	3.053	.0849

STATION 11 FLOW FIELD DESCRIPTION

STREAM -LINE	RADIUS	VELOCITIES MERID	VELOCITIES TANGEN	VELOCITIES TOTAL	TEMPERATURES TOTAL	TEMPERATURES STATIC	PRESSURES TOTAL	PRESSURES STATIC	MACH NO	ANGLES WHIRL	ANGLES SLOPE	RADIUS OF CURVATURE	SPECIFIC WEIGHT
1	7.6199	749.42	686.77	1016.51	643.644	559.029	30.761	18.727	.8733	42.50	9.05	26.367	.0895
2	7.6667	762.30	683.65	1023.95	643.841	557.981	30.667	18.527	.8806	41.89	8.79	33.308	.0887
3	7.7123	772.68	680.61	1029.69	644.033	557.205	30.575	18.362	.8861	41.38	8.49	41.262	.0881
4	7.7575	780.00	677.68	1033.27	644.215	556.783	30.486	18.241	.8895	40.98	8.17	49.320	.0875
5	7.8010	784.48	674.84	1034.80	644.390	556.699	30.399	18.152	.8909	40.70	7.86	57.140	.0872
6	7.8436	786.65	672.08	1034.67	644.559	556.890	30.314	18.117	.8906	40.51	7.57	60.173	.0869
7	7.8857	785.80	669.67	1032.44	644.780	557.491	30.200	18.095	.8883	40.44	7.31	54.489	.0867
8	7.9277	781.14	667.83	1027.70	645.103	558.515	30.032	18.091	.8833	40.53	7.10	43.093	.0865
9	7.9695	775.64	666.00	1022.34	645.425	559.841	29.864	18.097	.8777	40.65	6.93	32.354	.0864
10	8.0122	766.35	670.03	1017.95	646.866	562.021	29.710	18.108	.8723	41.16	6.79	24.462	.0861
11	8.0554	746.71	690.73	1017.19	651.524	566.525	29.595	18.121	.8679	42.77	6.64	19.364	.0854
12	8.0999	725.23	711.84	1016.21	656.326	571.809	29.476	18.136	.8634	44.47	6.44	16.076	.0847
13	8.1459	706.27	731.59	1016.88	660.933	576.321	29.422	18.157	.8606	46.01	6.16	13.718	.0842
14	8.1930	689.55	750.12	1018.90	665.365	580.434	29.428	18.185	.8592	47.41	5.79	11.886	.0837
15	8.2415	670.64	768.94	1020.31	669.919	584.771	29.433	18.227	.8573	48.91	5.30	10.418	.0833
16	8.2918	649.05	805.27	1036.61	678.589	590.732	29.827	18.292	.8656	51.24	4.60	9.450	.0827
17	8.3446	619.70	853.98	1055.14	688.669	597.683	30.338	18.402	.8770	54.03	3.60	9.138	.0823
18	8.4011	587.34	887.75	1064.46	696.551	603.985	30.738	18.583	.8802	56.51	2.22	9.561	.0822
19	8.4625	550.99	910.36	1063.65	702.385	609.390	31.034	18.862	.8752	58.86	.44	11.247	.0826
20	8.5325	492.92	935.72	1057.61	709.032	617.720	31.373	19.278	.8648	62.22	-1.75	19.359	.0834
21	8.6199	401.87	966.75	1046.95	717.312	627.881	31.794	19.860	.8492	67.43	-4.27	-27.461	.0845

BLADE DATA

LOCAT -ION	BLADE-ANGLES SECTION	BLADE-ANGLES LEAN	REL FLOW ANGLE	DEVIATION INCIDENCE	LOSS COEFF	BLADE SPEED	RELATIVE MACH NO	RELATIVE VELOCITY	RELATIVE PRESSURE	RELATIVE TEMPERATURE	PRESSURE RATIO	DELTA T ON T	ISENTROPIC EFFICIENCY	POLYTROPIC EFFICIENCY
1	48.817	-39.941	42.502	-6.315	0.0000	0.0	.8733	1016.51	30.761	643.644	2.093	.241	.9697	.9727
2	48.056	-37.355	41.886	-6.169	0.0000	0.0	.8806	1023.95	30.667	643.841	2.087	.241	.9638	.9673
3	47.252	-34.538	41.375	-5.877	0.0000	0.0	.8861	1029.69	30.575	644.033	2.081	.242	.9579	.9620
4	46.617	-31.562	40.985	-5.632	0.0000	0.0	.8895	1033.27	30.486	644.215	2.074	.242	.9523	.9569
5	46.114	-28.484	40.704	-5.411	0.0000	0.0	.8909	1034.80	30.399	644.390	2.069	.242	.9469	.9520
6	45.723	-25.350	40.508	-5.215	0.0000	0.0	.8906	1034.67	30.314	644.559	2.063	.243	.9415	.9472
~~7~~	~~45.387~~	~~-22.215~~	~~40.438~~	~~-4.949~~	~~0.0000~~	~~0.0~~	.8883	1032.44	30.200	644.780	2.055	.243	.9345	.9408
8	45.099	-19.119	40.529	-4.571	0.0000	0.0	.8833	1027.70	30.032	645.103	2.044	.244	.9241	.9313
9	44.861	-15.968	40.651	-4.210	0.0000	0.0	.8777	1022.34	29.864	645.425	2.032	.244	.9138	.9219
10	44.682	-12.585	41.164	-3.518	0.0000	0.0	.8723	1017.95	29.710	646.866	2.022	.247	.8962	.9059
11	44.570	-8.789	42.770	-1.800	0.0000	0.0	.8679	1017.19	29.595	651.524	2.014	.256	.8594	.8725
12	44.554	-4.725	44.466	-.088	0.0000	0.0	.8634	1016.21	29.476	656.326	2.006	.265	.8241	.8403
~~13~~	~~44.675~~	~~-.734~~	~~46.009~~	~~1.334~~	~~0.0000~~	~~0.0~~	~~.8606~~	1016.88	29.422	660.933	2.002	.274	.7950	.8138
14	44.935	2.792	47.409	2.474	0.0000	0.0	.8592	1018.90	29.428	665.365	2.002	.283	.7711	.7921
15	45.251	6.683	48.906	3.655	0.0000	0.0	.8573	1020.31	29.433	669.919	2.003	.292	.7481	.7711
16	45.521	11.951	51.235	5.714	0.0000	0.0	.8656	1036.61	29.827	678.589	2.030	.308	.7223	.7482
17	45.815	19.000	54.033	8.218	0.0000	0.0	.8770	1055.14	30.338	688.669	2.064	.328	.6973	.7261
18	46.401	26.968	56.511	10.110	0.0000	0.0	.8802	1064.46	30.738	696.551	2.092	.343	.6797	.7105
~~19~~	~~47.477~~	~~34.705~~	~~58.897~~	~~11.380~~	~~0.0000~~	~~0.0~~	~~.8752~~	1063.65	31.034	702.385	2.112	.354	.6675	.6999
20	48.895	41.518	62.220	13.325	0.0000	0.0	.8648	1057.61	31.373	709.032	2.135	.367	.6544	.6885
21	50.814	46.652	67.428	16.614	0.0000	0.0	.8492	1046.95	31.794	717.312	2.163	.383	.6393	.6754

STATION 11 INTEGRATED PERFORMANCE PRESSURE RATIO = 2.056 ISEN. EFF.= .802 POLY. EFF.= .821 DELTA T ON T = .283

STATION 12 FLOW FIELD DESCRIPTION

STREAM -LINE	RADIUS	VELOCITIES MERID	VELOCITIES TANGEN	VELOCITIES TOTAL	TEMPERATURES TOTAL	TEMPERATURES STATIC	PRESSURES TOTAL	PRESSURES STATIC	MACH NO	ANGLES WHIRL	ANGLES SLOPE	RADIUS OF CURVATURE	SPECIFIC WEIGHT
1	7.7150	880.90	567.38	1048.08	543.644	553.682	30.028	17.673	.9048	32.81	5.21	-3.688	.0853
2	7.7531	865.77	551.69	1026.61	543.841	557.534	29.962	18.050	.8832	32.51	4.81	-3.484	.0865
3	7.7914	850.37	534.48	1004.39	544.033	561.427	29.894	18.436	.8611	32.15	4.41	-3.319	.0877
4	7.8299	834.79	517.13	981.99	544.215	565.260	29.820	18.817	.8391	31.78	4.05	-3.199	.0889
5	7.8688	818.89	500.89	959.93	544.390	568.949	29.739	19.181	.8176	31.45	3.73	-3.129	.0901
6	7.9079	802.39	485.67	938.44	544.559	572.463	29.644	19.520	.7968	31.24	3.47	-3.094	.0911
7	7.9475	785.44	474.29	917.53	544.780	575.867	29.526	19.828	.7768	31.13	3.30	-3.083	.0920
8	7.9873	768.13	452.38	896.56	545.103	579.309	29.368	20.105	.7568	31.05	3.21	-3.083	.0927
9	8.0288	752.28	451.49	877.31	545.425	582.430	29.226	20.354	.7386	30.97	3.21	-3.090	.0934
10	8.0707	738.62	441.93	860.74	546.865	586.235	29.108	20.578	.7223	30.89	3.25	-3.106	.0938
11	8.1134	728.31	435.35	848.50	551.524	592.520	29.020	20.780	.7082	30.87	3.35	-3.151	.0937
12	8.1570	718.53	430.31	837.53	656.326	598.952	28.938	20.961	.6954	30.92	3.42	-3.248	.0935
13	8.2015	711.43	427.99	830.24	660.933	604.567	28.923	21.122	.6862	31.03	3.47	-3.403	.0934
14	8.2465	706.57	427.60	825.89	665.365	609.502	28.954	21.263	.6793	31.18	3.48	-3.653	.0932
15	8.2921	702.83	428.28	823.08	669.919	614.548	28.988	21.381	.6748	31.35	3.43	-4.025	.0930
16	8.3378	7[illegible].75	439.2[illegible]	838.08	678.589	621.205	29.326	21.470	.6834	31.61	3.26	-4.679	.0923
17	8.3833	[illegible]10	455.88	859.89	683.669	628.289	29.756	21.521	.6973	32.02	2.88	-6.082	.0915
18	8.4289	[illegible]35	474.14	880.01	696.551	633.334	30.100	21.508	.7108	32.60	2.24	-10.084	.0907
19	8.4752	[illegible]2.02	493.55	900.05	702.385	636.273	30.343	21.398	.7253	33.25	1.29	-48.345	.0899
20	8.5229	769.74	517.30	927.41	709.032	638.859	30.598	21.170	.7459	33.90	-.08	14.410	.0885
21	8.5730	792.15	545.00	961.87	717.312	641.855	30.876	20.843	.7713	34.56	-2.03	5.947	.0868

BLADE DATA

LOCAT -ION	BLADE-ANGLES SECTION	BLADE-ANGLES LEAN	REL FLOW ANGLE	DEVIATION INCIDENCE	LOSS COEFF	BLADE SPEED	RELATIVE MACH NO	RELATIVE VELOCITY	RELATIVE PRESSURE	RELATIVE TEMPERATURE	PRESSURE RATIO	DELTA T ON T	ISENTROPIC EFFICIENCY	POLYTROPIC EFFICIENCY
1	31.959	-24.847	32.866	.849	.0609	0.0	.9048	1048.08	30.023	643.644	2.043	.241	.9347	.9409
2	31.645	-23.396	32.507	.862	.0581	0.0	.8832	1026.61	29.962	643.841	2.039	.241	.9301	.9367
3	31.274	-21.464	32.150	.876	.0559	0.0	.8611	1004.39	29.894	644.033	2.034	.242	.9254	.9324
4	30.883	-19.213	31.777	.894	.0544	0.0	.8391	981.99	29.820	644.215	2.029	.242	.9205	.9280
5	30.539	-16.854	31.453	.914	.0539	0.0	.8175	959.93	29.739	644.390	2.024	.242	.9153	.9232
6	30.301	-14.589	31.238	.937	.0549	0.0	.7968	938.44	29.644	644.559	2.017	.243	.9095	.9179
7	30.166	-12.441	31.125	.959	.0557	0.0	.7768	917.53	29.525	644.780	2.009	.243	.9022	.9113
8	30.066	-10.325	31.046	.981	.0555	0.0	.7569	896.56	29.368	645.103	1.998	.244	.8923	.9022
9	29.965	-8.160	30.965	1.000	.0542	0.0	.7385	877.3.	29.226	645.425	1.989	.244	.8832	.8938
10	29.876	-5.939	30.893	1.017	.0519	0.0	.7223	860.74	29.109	646.366	1.981	.247	.8675	.8795
11	29.839	-3.722	30.869	1.031	.0501	0.0	.7082	848.50	29.020	651.524	1.975	.256	.8329	.8480
12	29.876	-1.568	30.917	1.041	.0475	0.0	.6954	837.53	28.938	656.326	1.969	.265	.8001	.8180
- 13	29.983	.604	31.030	1.047	.0443	0.0	.6862	830.24	28.923	660.333	1.968	.274	.7735	.7938
14	30.133	2.986	31.182	1.049	.0421	0.0	.6793	825.88	28.954	665.365	1.970	.283	.7513	.7736
15	30.309	5.768	31.355	1.046	.0397	0.0	.6748	823.08	28.988	669.319	1.972	.292	.7300	.7542
16	30.566	8.982	31.607	1.040	.0434	0.0	.6834	838.08	29.326	678.589	1.996	.308	.7033	.7303
17	30.980	12.590	32.016	1.036	.0485	0.0	.6973	859.89	29.756	683.569	2.025	.328	.6768	.7067
18	31.505	16.533	32.601	1.036	.0525	0.0	.7108	880.01	30.100	696.551	2.048	.343	.6583	.6903
---19-	32.214	20.598	33.254	1.040	.0568	0.0	.7253	900.05	30.343	702.385	2.065	.354	.6452	.6788
20	32.850	24.527	33.903	1.053	.0641	0.0	.7459	927.41	30.598	709.132	2.082	.357	.6305	.6658
21	33.478	28.225	34.557	1.060	.07-9	0.0	.7713	961.87	30.876	717.312	2.101	.383	.6124	.6498

STATION 12 INTEGRATED PERFORMANCE PRESSURE RATIO = 2.013 ISEN. EFF.= .777 POLY. EFF.= .798 DELTA T ON T = .283

STATION 13 FLOW FIELD DESCRIPTION

STREAM -LINE	RADIUS	VELOCITIES MERID	VELOCITIES TANGEN	VELOCITIES TOTAL	TEMPERATURES TOTAL	TEMPERATURES STATIC	PRESSURES TOTAL	PRESSURES STATIC	MACH NO	ANGLES WHIRL	ANGLES SLOPE	RADIUS OF CURVATURE	SPECIFIC WEIGHT
1	7.7230	782.70	246.06	821.06	643.644	588.473	29.322	21.383	.6877	17.58	-2.23	-5.196	.0971
2	7.7566	753.30	243.22	806.83	643.841	590.569	29.268	21.589	.6746	17.55	-2.29	-5.768	.0977
3	7.7912	756.30	238.92	793.15	644.033	592.555	29.212	21.781	.6621	17.53	-2.33	-6.488	.0982
4	7.8266	743.79	235.00	780.04	644.215	594.427	29.151	21.956	.6501	17.53	-2.34	-7.403	.0987
5	7.8631	731.80	231.22	767.46	644.390	596.195	29.081	22.112	.6387	17.53	-2.31	-8.573	.0991
6	7.9007	719.73	227.01	754.68	644.559	597.959	28.984	22.248	.6271	17.51	-2.25	-10.084	.0994
7	7.9394	708.05	222.54	742.21	644.780	599.710	28.868	22.362	.6159	17.45	-2.12	-12.044	.0996
8	7.9796	696.25	218.02	729.59	645.103	601.555	28.724	22.452	.6045	17.39	-1.94	-14.579	.0997
9	8.0211	686.65	214.76	719.46	645.425	603.080	28.608	22.522	.5953	17.37	-1.72	-17.813	.0998
10	8.0639	679.85	212.99	712.43	646.866	605.347	28.521	22.574	.5884	17.39	-1.47	-21.794	.0996
11	8.1079	676.45	212.50	709.05	651.524	610.409	28.456	22.613	.5832	17.44	-1.20	-26.458	.0990
12	8.1531	674.45	212.29	707.03	656.326	615.449	28.405	22.641	.5792	17.47	-.91	-31.433	.0983
13	8.1993	676.34	213.10	709.11	660.933	619.830	28.422	22.662	.5789	17.49	-.63	-35.928	.0977
14	8.2463	680.03	214.53	713.07	665.365	623.810	28.470	22.676	.5803	17.51	-.35	-39.166	.0971
15	8.2939	684.23	216.42	717.64	669.919	627.540	28.523	22.686	.5821	17.55	-.09	-40.919	.0965
16	8.3417	701.42	223.05	736.03	678.589	634.345	28.792	22.693	.5940	17.64	.17	-42.309	.0956
17	8.3893	721.90	231.83	758.21	688.669	641.740	29.123	22.697	.6084	17.80	.42	-45.402	.0945
18	8.4367	733.10	240.66	776.35	696.551	647.370	29.397	22.695	.6203	18.06	.64	-53.569	.0937
19	8.4841	749.22	249.13	789.55	702.385	651.532	29.584	22.682	.6283	18.39	.82	-80.419	.0930
20	8.5316	751.81	259.18	804.70	709.032	656.229	29.778	22.649	.6387	18.79	.91	-445.361	.0922
21	8.5795	777.04	271.04	822.96	717.312	662.109	29.986	22.589	.6503	19.23	.88	76.314	.0912

BLADE DATA

LOCAT -ION	BLADE-ANGLES SECTION	BLADE-ANGLES LEAN	REL FLOW ANGLE	DEVIATION INCIDENCE	LOSS COEFF	BLADE SPEED	RELATIVE MACH NO	RELATIVE VELOCITY	RELATIVE PRESSURE	RELATIVE TEMPERATURE	PRESSURE RATIO	DELTA T ON T	ISENTROPIC EFFICIENCY	POLYTROPIC EFFICIENCY
1	15.234	-9.414	17.585	1.351	.1195	0.0	.6877	821.06	29.322	643.644	1.995	.241	.9885	.9896
2	15.180	-8.925	17.545	1.365	.1152	0.0	.6746	805.83	29.268	643.841	1.992	.241	.8964	.9059
3	15.149	-8.371	17.532	1.382	.1115	0.0	.6621	793.15	29.212	644.033	1.988	.242	.8923	.9021
4	15.128	-7.739	17.534	1.406	.1090	0.0	.6501	780.04	29.151	644.215	1.984	.242	.8880	.8982
5	15.099	-7.015	17.535	1.436	.1077	0.0	.6387	767.46	29.081	644.390	1.979	.242	.8833	.8939
6	15.035	-6.133	17.506	1.471	.1091	0.0	.6271	754.68	28.984	644.559	1.972	.243	.8774	.8885
7	15.939	-5.256	17.448	1.508	.1101	0.0	.6159	742.21	28.868	644.780	1.964	.243	.8702	.8818
8	15.842	-4.271	17.387	1.546	.1095	0.0	.6045	729.59	28.724	645.103	1.955	.244	.8609	.8733
9	15.788	-3.277	17.368	1.580	.1065	0.0	.5953	719.46	28.608	645.425	1.947	.244	.8530	.8660
10	15.784	-2.325	17.395	1.611	.1024	0.0	.5884	712.43	28.521	646.366	1.941	.247	.8392	.8534
11	15.803	-1.468	17.440	1.636	.0992	0.0	.5832	709.05	28.456	651.524	1.936	.256	.8066	.8236
12	15.815	-.755	17.471	1.656	.0944	0.0	.5792	707.08	28.405	655.326	1.933	.265	.776[illegible]	.7956
13	15.819	-.148	17.488	1.670	.0889	0.0	.5789	709.11	28.422	660.333	1.934	.274	.7516	.7733
14	15.835	.492	17.509	1.674	.0852	0.0	.5803	713.07	28.470	665.365	1.937	.283	.7389	.7544
15	15.882	1.258	17.552	1.671	.0812	0.0	.5821	717.64	28.523	669.319	1.941	.292	.7118	.7363
16	15.980	2.234	17.641	1.661	.0897	0.0	.5940	736.03	28.792	678.589	1.959	.308	.6827	.7188
17	15.151	3.275	17.804	1.653	.1019	0.0	.6084	758.21	29.123	688.569	1.982	.328	.6541	[illegible]
18	15.409	4.336	18.059	1.650	.1103	0.0	.6203	776.35	29.397	696.551	2.000	.343	.6344	.6676
19	15.739	5.631	18.393	1.654	.1192	0.0	.6289	789.55	29.584	702.385	2.013	.354	.6204	.6551
20	17.115	7.020	18.789	1.674	.1318	0.0	.6387	804.70	29.778	709.032	2.026	.367	.6048	.6412
21	17.510	8.542	19.229	1.719	.1513	0.0	.6503	822.96	29.986	717.312	2.040	.383	.5857	.6242

STATION 13 INTEGRATED PERFORMANCE PRESSURE RATIO = 1.970 ISEN. EFF.= .751 POLY. EFF.= .773 DELTA T ON T = .283

STATION 14 FLOW FIELD DESCRIPTION

STREAM -LINE	RADIUS	VELOCITIES MERID	VELOCITIES TANGEN	VELOCITIES TOTAL	TEMPERATURES TOTAL	TEMPERATURES STATIC	PRESSURES TOTAL	PRESSURES STATIC	MACH NO	ANGLES WHIRL	ANGLES SLOPE	RADIUS OF CURVATURE	SPECIFIC WEIGHT
1	7.6720	656.03	71.06	659.85	643.644	608.025	28.613	23.410	.5438	6.18	-4.29	16.241	.1029
2	7.7099	653.94	69.53	657.63	643.841	608.464	28.553	23.404	.5418	6.07	-4.04	17.119	.1028
3	7.7436	651.75	68.17	655.34	644.033	608.905	28.511	23.397	.5397	5.97	-3.79	18.089	.1027
4	7.7881	649.40	66.90	652.84	644.215	609.353	28.457	23.389	.5374	5.88	-3.52	19.166	.1026
5	7.8296	646.55	65.75	649.93	644.390	609.832	28.395	23.381	.5349	5.81	-3.25	20.376	.1024
6	7.8701	641.79	64.51	645.03	644.559	610.527	28.297	23.371	.5305	5.74	-2.96	21.763	.1023
7	7.9127	636.27	63.29	639.41	644.780	611.340	28.187	23.362	.5255	5.68	-2.65	23.426	.1021
8	7.9566	629.71	62.06	632.76	645.103	612.355	28.050	23.352	.5197	5.63	-2.32	25.576	.1019
9	8.0016	625.47	61.15	628.45	645.425	613.123	27.975	23.343	.5158	5.58	-1.99	28.503	.1017
10	8.0477	623.90	60.61	626.33	646.866	614.732	27.925	23.333	.5138	5.55	-1.66	32.604	.1014
11	8.0948	624.47	60.37	627.39	651.524	619.341	27.887	23.325	.5124	5.52	-1.35	38.458	.1006
12	8.1429	626.35	60.34	629.25	656.326	623.359	27.871	23.317	.5120	5.50	-1.05	47.230	.0998
13	8.1917	632.32	60.77	635.23	660.933	627.955	27.923	23.309	.5152	5.49	-.78	61.732	.0992
14	8.2410	639.11	61.37	642.05	665.365	631.583	27.992	23.303	.5192	5.48	-.54	88.325	.0986
15	8.2907	646.21	62.13	649.19	669.919	635.491	28.068	23.299	.5235	5.49	-.32	149.594	.0980
16	8.3406	662.61	64.01	665.90	678.589	642.383	28.273	23.296	.5341	5.52	-.11	358.512	.0969
17	8.3903	681.51	66.44	684.75	688.669	650.403	28.509	23.295	.5459	5.57	.12	5780.492	.0957
18	8.4399	696.89	69.05	700.29	696.551	656.545	28.713	23.296	.5557	5.66	.37	-727.124	.0948
19	8.4896	706.45	71.82	710.09	702.385	661.264	28.838	23.298	.5615	5.81	.61	-461.545	.0941
20	8.5396	716.27	75.61	720.25	709.032	666.742	28.965	23.302	.5672	6.03	.84	-445.844	.0934
21	8.5900	727.00	80.60	731.45	717.312	673.719	29.096	23.306	.5731	6.33	1.06	-510.607	.0924

BLADE DATA

LOCAT -ION	BLADE-ANGLES SECTION	BLADE-ANGLES LEAN	REL FLOW ANGLE	DEVIATION INCIDENCE	LOSS COEFF	BLADE SPEED	RELATIVE MACH NO	RELATIVE VELOCITY	RELATIVE PRESSURE	RELATIVE TEMPERATURE	PRESSURE RATIO	DELTA T ON T	ISENTROPIC EFFICIENCY	POLYTROPIC EFFICIENCY
1	3.965	-1.054	6.182	2.218	.1785	0.0	.5438	659.86	28.613	643.544	1.947	.241	.8654	.8774
2	3.833	-.995	6.074	2.241	.1733	0.0	.5418	657.63	28.563	643.841	1.944	.241	.8616	.8738
3	3.701	-.922	5.971	2.270	.1690	0.0	.5397	655.31	28.511	644.333	1.940	.242	.8577	.8702
4	3.573	-.838	5.882	2.303	.1657	0.0	.5374	652.84	28.457	644.215	1.936	.242	.8537	.8666
5	3.451	-.749	5.806	2.355	.1637	0.0	.5349	649.99	28.395	644.390	1.932	.242	.8495	.8627
6	3.331	-.662	5.740	2.409	.1654	0.0	.5305	645.03	28.297	644.559	1.925	.243	.8434	.8571
7	3.213	-.584	5.681	2.468	.1663	0.0	.5255	639.41	28.187	644.780	1.918	.243	.8365	.8506
8	3.099	-.515	5.628	2.530	.1651	0.0	.5197	632.76	28.060	645.103	1.909	.244	.8288	.8428
9	2.994	-.457	5.594	2.590	.1605	0.0	.5158	628.45	27.975	645.425	1.904	.244	.8216	.8369
10	2.904	-.405	5.548	2.644	.1538	0.0	.5138	626.83	27.925	646.366	1.900	.247	.8180	.8262
11	2.832	-.348	5.521	2.690	.1489	0.0	.5124	627.38	27.887	651.524	1.898	.256	.7796	.7984
12	2.780	-.273	5.502	2.722	.1415	0.0	.5120	629.26	27.871	656.326	1.896	.265	.7516	.7727
13	2.751	-.187	5.490	2.739	.1331	0.0	.5152	635.23	27.923	660.933	1.908	.274	.7295	.7525
14	2.749	-.136	5.495	2.736	.1277	0.0	.5192	642.05	27.992	665.365	1.905	.283	.7104	.7351
15	2.776	-.159	5.492	2.716	.1213	0.0	.5235	649.19	28.068	669.919	1.910	.292	.6921	.7184
16	2.829	-.232	5.517	2.608	.1348	0.0	.5341	665.90	28.273	678.589	1.924	.308	.6625	.6916
17	2.903	-.457	5.558	2.666	.1533	0.0	.5459	684.75	28.509	688.569	1.940	.328	.6317	.6638
18	2.998	-.603	5.598	2.660	.1666	0.0	.5557	700.29	28.713	696.551	1.954	.343	.6108	.6449
19	3.127	-.852	5.805	2.678	.1804	0.0	.5615	710.09	28.838	702.385	1.962	.354	.5955	.6312
20	3.301	-.980	6.026	2.725	.1991	0.0	.5672	720.25	28.965	709.032	1.971	.367	.5787	.6160
21	3.508	-1.055	6.326	2.818	.2261	0.0	.5731	731.45	29.096	717.312	1.980	.383	.5585	.5976

STATION 14 INTEGRATED PERFORMANCE PRESSURE RATIO = 1.927 ISEN. EFF.= .724 POLY. EFF.= .748 DELTA T ON T = .283

STATION 15 FLOW FIELD DESCRIPTION

STREAM -LINE	RADIUS	VELOCITIES MERID	VELOCITIES TANGEN	VELOCITIES TOTAL	TEMPERATURES TOTAL	TEMPERATURES STATIC	PRESSURES TOTAL	PRESSURES STATIC	MACH NO	ANGLES WHIRL	ANGLES SLOPE	RADIUS OF CURVATURE	SPECIFIC WEIGHT
1	7.5400	604.85	0.00	604.85	643.544	613.721	27.905	23.594	.4962	0.00	-1.65	10.624	.1027
2	7.6803	604.30	0.00	604.30	643.841	613.973	27.859	23.563	.4956	0.00	-1.60	11.287	.1025
3	7.7214	603.57	0.00	603.57	644.033	614.237	27.812	23.534	.4949	0.00	-1.53	12.069	.1024
4	7.7635	602.64	0.00	602.64	644.215	614.512	27.753	23.507	.4941	0.00	-1.44	13.008	.1022
5	7.8064	601.17	0.00	601.17	644.390	614.831	27.709	23.481	.4927	0.00	-1.35	14.157	.1020
6	7.8504	596.51	0.00	596.51	644.559	615.458	27.607	23.457	.4887	0.00	-1.25	15.640	.1018
7	7.8955	591.43	0.00	591.43	644.780	616.173	27.502	23.435	.4842	0.00	-1.13	17.662	.1016
8	7.9419	585.92	0.00	585.92	645.103	617.023	27.394	23.416	.4794	0.00	-1.00	20.498	.1014
9	7.9894	583.78	0.00	583.78	645.425	617.554	27.341	23.400	.4774	0.00	-.87	24.519	.1012
10	8.0377	584.84	0.00	584.84	646.866	618.895	27.331	23.386	.4778	0.00	-.73	30.234	.1010
11	8.0869	587.13	0.00	587.13	651.524	623.341	27.321	23.375	.4780	0.00	-.60	38.777	.1002
12	8.1366	591.18	0.00	591.18	655.326	627.761	27.339	23.367	.4795	0.00	-.48	52.549	.0995
13	8.1873	599.51	0.00	599.51	660.933	631.563	27.424	23.360	.4849	0.00	-.36	76.100	.0988
14	8.2380	607.58	0.00	607.58	665.365	635.205	27.511	23.356	.4900	0.00	-.26	123.456	.0982
15	8.2889	615.99	0.00	615.99	669.919	638.925	27.604	23.354	.4954	0.00	-.17	263.774	.0977
16	8.3400	628.67	0.00	628.67	678.589	646.322	27.737	23.353	.5027	0.00	-.08	-1888.869	.0965
17	8.3914	641.73	0.00	641.73	688.669	655.059	27.871	23.354	.5098	0.00	.03	-173.906	.0953
18	8.4429	653.44	0.00	653.44	696.551	661.724	28.002	23.358	.5165	0.00	.15	-86.145	.0943
19	8.4948	659.89	0.00	659.89	702.385	666.579	28.069	23.365	.5196	0.00	.27	-56.756	.0936
20	8.5471	666.52	0.00	666.52	709.032	672.922	28.137	23.375	.5225	0.00	.40	-42.359	.0928
21	8.6000	673.72	0.00	673.72	717.312	680.335	28.206	23.387	.5253	0.00	.52	-33.905	.0919

BLADE DATA

LOCAT -ION	BLADE-ANGLES SECTION	BLADE-ANGLES LEAN	REL FLOW ANGLE	DEVIATION INCIDENCE	LOSS COEFF	BLADE SPEED	RELATIVE MACH NO	RELATIVE VELOCITY	RELATIVE PRESSURE	RELATIVE TEMPERATURE	PRESSURE RATIO	DELTA T ON T	ISENTROPIC EFFICIENCY	POLYTROPIC EFFICIENCY
1	-7.239	.020	0.000	7.239	.2373	0.0	.4962	604.86	27.905	643.544	1.899	.241	.8299	.8444
2	-7.398	.020	0.000	7.399	.2313	0.0	.4955	604.30	27.859	643.841	1.896	.241	.8262	.8410
3	-7.566	.019	0.000	7.566	.2263	0.0	.4949	603.57	27.812	644.033	1.892	.242	.8226	.8376
4	-7.739	.017	0.000	7.739	.2223	0.0	.4941	602.64	27.763	644.215	1.889	.242	.8189	.8342
5	-7.910	.015	0.000	7.910	.2199	0.0	.4927	601.17	27.709	644.390	1.885	.242	.8150	.8306
6	-8.081	.013	0.000	8.081	.2219	0.0	.4887	596.51	27.607	644.559	1.879	.243	.8087	.8248
7	-8.249	.011	0.000	8.249	.2229	0.0	.4842	591.43	27.502	644.780	1.871	.243	.8028	.8185
8	-8.413	.010	0.000	8.413	.2209	0.0	.4794	585.92	27.394	645.103	1.864	.244	.7945	.8115
9	-8.567	.008	0.000	8.567	.2144	0.0	.4774	583.78	27.341	645.425	1.860	.244	.7897	.8071
10	-8.706	.005	0.000	8.705	.2050	0.0	.4778	584.84	27.331	646.366	1.860	.247	.7803	.7985
11	-8.827	.004	0.000	8.827	.1982	0.0	.4780	587.13	27.321	651.524	1.859	.256	.7524	.7728
12	-8.928	.003	0.000	8.928	.1885	0.0	.4795	591.18	27.339	655.326	1.860	.265	.7269	.7494
13	-9.004	.000	0.000	9.004	.1773	0.0	.4849	599.51	27.424	660.333	1.866	.274	.7072	.7314
14	-9.050	-.002	0.000	9.050	.1705	0.0	.4900	607.58	27.511	665.365	1.872	.283	.6895	.7153
15	-9.063	-.005	0.000	9.063	.1532	0.0	.4954	615.99	27.604	669.919	1.878	.292	.6726	.6999
16	-9.058	-.008	0.000	9.059	.1812	0.0	.5027	628.67	27.737	678.589	1.887	.308	.6413	.6714
17	-9.062	-.013	0.000	9.062	.2067	0.0	.5098	641.78	27.871	688.569	1.897	.328	.6081	.6411
18	-9.089	-.018	0.000	9.089	.2251	0.0	.5165	653.44	28.002	696.551	1.905	.343	.5857	.6208
19	-9.129	-.025	0.000	9.129	.2435	0.0	.5195	659.89	28.069	702.385	1.910	.354	.5694	.6059
20	-9.171	-.032	0.000	9.171	.2675	0.0	.5225	666.52	28.137	709.132	1.915	.367	.5515	.5897
21	-9.213	-.038	0.000	9.213	.3007	0.0	.5253	673.72	28.206	717.312	1.919	.383	.5307	.5706

STATION 15 INTEGRATED PERFORMANCE PRESSURE RATIO = 1.883 ISEN. EFF.= .696 POLY. EFF.= .721 DELTA T ON T = .283

STATION 16 FLOW FIELD DESCRIPTION

STREAM -LINE	RADIUS	VELOCITIES MERID	VELOCITIES TANGEN	VELOCITIES TOTAL	TEMPERATURES TOTAL	TEMPERATURES STATIC	PRESSURES TOTAL	PRESSURES STATIC	MACH NO	ANGLES WHIRL	ANGLES SLOPE	RADIUS OF CURVATURE	SPECIFIC WEIGHT
1	7.6400	619.13	0.00	619.13	643.644	612.291	27.905	23.401	.5085	0.00	0.00	0.000	.1021
2	7.6796	616.39	0.00	616.39	643.841	612.765	27.859	23.400	.5060	0.00	-.03	1248.350	.1020
3	7.7203	613.57	0.00	613.57	644.033	613.241	27.812	23.400	.5035	0.00	-.05	677.157	.1020
4	7.7619	610.68	0.00	610.68	644.215	613.714	27.763	23.399	.5010	0.00	-.07	493.189	.1019
5	7.8045	607.35	0.00	607.36	644.390	614.219	27.709	23.399	.4980	0.00	-.08	407.213	.1018
6	7.8482	601.02	0.00	601.02	644.559	615.016	27.607	23.398	.4925	0.00	-.09	361.350	.1017
7	7.8932	594.41	0.00	594.41	644.780	615.884	27.502	23.397	.4865	0.00	-.10	336.952	.1015
8	7.9395	587.53	0.00	587.53	645.103	616.873	27.394	23.396	.4808	0.00	-.11	326.798	.1013
9	7.9870	584.20	0.00	584.20	645.425	617.514	27.341	23.395	.4778	0.00	-.11	327.988	.1012
10	8.0354	584.27	0.00	584.27	646.866	618.950	27.331	23.394	.4773	0.00	-.10	339.613	.1010
11	8.0847	585.77	0.00	585.77	651.524	623.471	27.321	23.393	.4768	0.00	-.10	362.172	.1003
12	8.1348	589.22	0.00	589.22	656.326	627.950	27.339	23.392	.4779	0.00	-.09	397.729	.0995
13	8.1855	597.13	0.00	597.13	660.933	631.795	27.424	23.391	.4829	0.00	-.08	449.766	.0989
14	8.2364	604.95	0.00	604.95	665.365	635.465	27.511	23.390	.4878	0.00	-.07	524.512	.0983
15	8.2876	613.25	0.00	613.25	669.919	639.201	27.604	23.389	.4931	0.00	-.06	634.229	.0976
16	8.3390	625.93	0.00	625.93	678.589	646.502	27.737	23.389	.5004	0.00	-.05	802.284	.0966
17	8.3906	639.21	0.00	639.21	688.669	655.329	27.871	23.388	.5077	0.00	-.03	1078.253	.0954
18	8.4424	651.20	0.00	651.20	696.551	661.962	28.002	23.388	.5146	0.00	-.02	1583.990	.0944
19	8.4945	658.19	0.00	658.19	702.385	667.062	28.069	23.388	.5182	0.00	-.01	2788.658	.0937
20	8.5470	665.55	0.00	665.56	709.032	672.927	28.137	23.387	.5217	0.00	-.01	6508.799	.0929
21	8.6000	673.72	0.00	673.72	717.312	680.335	28.206	23.387	.5253	0.00	0.00	0.000	.0919

STATION 17 FLOW FIELD DESCRIPTION

STREAM -LINE	RADIUS	VELOCITIES MERID	VELOCITIES TANGEN	VELOCITIES TOTAL	TEMPERATURES TOTAL	TEMPERATURES STATIC	PRESSURES TOTAL	PRESSURES STATIC	MACH NO	ANGLES WHIRL	ANGLES SLOPE	RADIUS OF CURVATURE	SPECIFIC WEIGHT
1	7.6400	620.11	0.00	620.11	643.644	612.192	27.905	23.387	.5093	0.00	0.00	0.000	.1021
2	7.6796	617.35	0.00	617.36	643.841	612.668	27.859	23.387	.5069	0.00	-.00	0.000	.1020
3	7.7202	614.52	0.00	614.52	644.033	613.146	27.812	23.387	.5044	0.00	-.00	0.000	.1019
4	7.7618	611.58	0.00	611.58	644.215	613.523	27.763	23.387	.5017	0.00	-.00	0.000	.1018
5	7.8044	608.22	0.00	608.22	644.390	614.134	27.709	23.387	.4988	0.00	-.00	0.000	.1018
6	7.8481	601.81	0.00	601.81	644.559	614.937	27.607	23.387	.4932	0.00	-.00	0.000	.1016
7	7.8930	595.13	0.00	595.13	644.780	615.813	27.502	23.387	.4874	0.00	-.01	0.000	.1015
8	7.9393	588.19	0.00	588.19	645.103	616.510	27.394	23.387	.4813	0.00	-.01	0.000	.1013
9	7.9868	584.78	0.00	584.78	645.425	617.459	27.341	23.387	.4783	0.00	-.01	0.000	.1012
10	8.0352	584.75	0.00	584.76	646.866	618.903	27.331	23.387	.4777	0.00	-.01	0.000	.1010
11	8.0845	586.18	0.00	586.18	651.524	623.432	27.321	23.387	.4772	0.00	-.01	0.000	.1002
12	8.1346	589.55	0.00	589.55	656.326	627.918	27.339	23.387	.4782	0.00	-.01	0.000	.0995
13	8.1853	597.39	0.00	597.39	660.933	631.770	27.424	23.387	.4831	0.00	-.01	0.000	.0989
14	8.2363	605.15	0.00	605.15	665.365	635.445	27.511	23.387	.4880	0.00	-.01	0.000	.0983
15	8.2875	613.39	0.00	613.39	669.919	639.187	27.604	23.387	.4932	0.00	-.01	0.000	.0978
16	8.3389	626.03	0.00	626.03	678.589	646.593	27.737	23.387	.5005	0.00	-.00	0.000	.0966
17	8.3905	639.26	0.00	639.26	688.669	655.322	27.871	23.387	.5077	0.00	-.00	0.000	.0954
18	8.4423	651.23	0.00	651.23	696.551	661.359	28.002	23.387	.5147	0.00	-.00	0.000	.0944
19	8.4944	658.20	0.00	658.20	702.385	667.061	28.069	23.387	.5182	0.00	-.00	0.000	.0937
20	8.5470	665.55	0.00	665.56	709.032	672.927	28.137	23.387	.5217	0.00	-.00	0.000	.0929
21	8.6000	673.72	0.00	673.72	717.312	680.336	28.206	23.387	.5253	0.00	0.00	0.000	.0919

ROTOR PERFORMANCE

LOCAT -ION	INLET RADIUS	OUTLET RADIUS	INLET M. NO	INCID -ENCE	DEVIA -TION	LOSS COEFF	2-D D FACTOR	3-D D FACTOR	DELTA P ON Q	REL V RATIO	DELTA H/U**2	SECTION-ANGLES INLET	SECTION-ANGLES OUTLET	LEAN-ANGLES INLET	LEAN-ANGLES OUTLET
1	6.7500	7.5499	.9288	9.459	19.314	.0540	.3654	.3740	.5619	.7615	.6302	-62.667	-11.816	17.205	2.399
2	6.8661	7.5874	.9442	9.670	19.176	.0625	.3829	.3905	.5500	.7463	.6249	-62.592	-12.759	16.455	2.601
3	6.9813	7.6260	.9595	9.791	18.995	.0702	.3983	.4050	.5369	.7333	.6196	-62.589	-13.719	15.442	2.839
4	7.0957	7.6555	.9743	9.839	18.755	.0771	.4116	.4175	.5231	.7215	.6141	-62.552	-14.682	14.158	3.103
5	7.2092	7.7061	.9890	9.885	18.504	.0833	.4232	.4282	.5088	.7115	.6085	-62.713	-15.632	12.772	3.382
6	7.3219	7.7475	1.0050	9.958	18.249	.0889	.4330	.4373	.4941	.7031	.6028	-62.747	-16.552	11.442	3.662
7	7.4338	7.7899	1.0199	10.014	18.065	.0967	.4430	.4464	.4791	.6944	.5973	-62.802	-17.423	10.293	3.928
8	7.5451	7.8334	1.0347	10.027	18.026	.1089	.4542	.4570	.4639	.6843	.5922	-62.907	-18.234	9.371	4.154
9	7.6558	7.8781	1.0493	10.028	18.035	.1203	.4642	.4663	.4487	.6753	.5870	-63.035	-18.980	8.538	4.366
10	7.7661	7.9242	1.0637	10.044	17.943	.1417	.4903	.4918	.4334	.6613	.5868	-63.159	-19.671	7.673	4.536
11	7.8762	7.9725	1.0780	10.075	17.548	.1904	.5165	.5174	.4184	.6305	.6009	-63.282	-20.321	6.838	4.678
12	7.9861	8.0235	1.0922	10.112	17.313	.2356	.5528	.5532	.4039	.5995	.6147	-63.412	-20.945	6.146	4.793
13	8.0961	8.0785	1.1063	10.157	17.065	.2737	.5943	.5841	.3901	.5727	.6268	-63.543	-21.553	5.620	4.883
14	8.2063	8.1365	1.1203	10.224	16.782	.3034	.6111	.6104	.3770	.5503	.6372	-63.665	-22.141	5.227	4.943
15	8.3169	8.1977	1.1342	10.320	15.562	.3317	.6379	.6367	.3645	.5271	.6473	-63.772	-22.703	4.906	4.950
16	8.4279	8.2528	1.1481	10.442	15.348	.3695	.6792	.6776	.3531	.4937	.6738	-63.867	-23.230	4.561	4.919
17	8.5397	8.3327	1.1619	10.537	13.946	.4084	.7270	.7249	.3429	.4549	.7045	-63.960	-23.715	4.118	4.796
18	8.6525	8.4081	1.1757	10.739	13.233	.4345	.7524	.7599	.3342	.4255	.7241	-64.069	-24.148	3.586	4.578
19	8.7665	8.4885	1.1894	10.834	13.332	.4505	.7857	.7827	.3266	.4053	.7339	-64.207	-24.511	2.991	4.286
20	8.8822	8.5740	1.2030	11.031	13.840	.4697	.8144	.8111	.3205	.3911	.7454	-64.353	-24.798	2.385	3.952
21	9.0000	8.6699	1.2165	11.344	15.435	.4321	.8561	.8525	.3169	.3445	.7610	-64.476	-24.964	1.836	3.617

STATOR PERFORMANCE

LOCAT -ION	INLET RADIUS	OUTLET RADIUS	INLET M. NO	INCID -ENCE	DEVIA -TION	LOSS COEFF	2-D D FACTOR	3-D D FACTOR	DELTA P ON Q	REL V RATIO	DELTA H/U**2	SECTION-ANGLES INLET	SECTION-ANGLES OUTLET	LEAN-ANGLES INLET	LEAN-ANGLES OUTLET
1	7.6199	7.6400	.8733	-6.315	7.239	.2373	.5455	.5453	.4044	.5953	0.0000	48.817	-7.239	-39.941	.020
2	7.6667	7.6803	.8806	-6.169	7.398	.2313	.5547	.5546	.4149	.5902	0.0000	48.056	-7.398	-37.355	.020
3	7.7128	7.7214	.8861	-5.877	7.566	.2263	.5533	.5632	.4235	.5862	0.0000	47.252	-7.566	-34.538	.019
4	7.7575	7.7635	.8895	-5.632	7.739	.2223	.5707	.5706	.4300	.5832	0.0000	46.617	-7.739	-31.562	.017
5	7.8010	7.8064	.8909	-5.411	7.910	.2199	.5773	.5772	.4347	.5813	0.0000	46.114	-7.910	-28.484	.015
6	7.8436	7.8504	.8906	-5.215	8.081	.2219	.5858	.5857	.4378	.5765	0.0000	45.723	-8.081	-25.350	.013
7	7.8857	7.8955	.8883	-4.949	8.249	.2229	.5935	.5934	.4412	.5729	0.0000	45.387	-8.249	-22.215	.011
8	7.9277	7.9419	.8833	-4.571	8.413	.2209	.6005	.6003	.4460	.5701	0.0000	45.099	-8.413	-19.119	.010
9	7.9698	7.9894	.8777	-4.219	8.567	.2144	.6035	.6032	.4507	.5710	0.0000	44.861	-8.567	-15.968	.008
10	8.0122	8.0377	.8723	-3.518	8.706	.2050	.6048	.6045	.4550	.5745	0.0000	44.682	-8.706	-12.585	.006
11	8.0554	8.0869	.8679	-1.900	8.827	.1982	.6102	.6093	.4580	.5772	0.0000	44.570	-8.827	-8.789	.004
12	8.0999	8.1368	.8634	-.088	8.928	.1885	.6134	.6130	.4613	.5817	0.0000	44.554	-8.928	-4.725	.003
13	8.1459	8.1873	.8606	1.334	9.004	.1773	.6120	.6115	.4619	.5895	0.0000	44.675	-9.004	-.784	.000
14	8.1930	8.2380	.8592	2.474	9.050	.1705	.6101	.6096	.4599	.5963	0.0000	44.935	-9.050	2.792	-.002
15	8.2415	8.2889	.8573	3.655	9.063	.1632	.6068	.6062	.4575	.6037	0.0000	45.251	-9.053	6.683	-.005
16	8.2918	8.3400	.8666	5.714	9.058	.1812	.6094	.6088	.4387	.6065	0.0000	45.521	-9.058	11.951	-.008
17	8.3446	8.3914	.8770	8.218	9.052	.2067	.6126	.6119	.4149	.6082	0.0000	45.815	-9.052	19.000	-.013
18	8.4011	8.4429	.8802	10.110	9.089	.2251	.6087	.6081	.3929	.6139	0.0000	46.401	-9.089	26.968	-.018
19	8.4625	8.4948	.8752	11.380	9.129	.2435	.6007	.6002	.3699	.6204	0.0000	47.477	-9.129	34.705	-.025
20	8.5325	8.5471	.8648	13.325	9.171	.2675	.5881	.5879	.3387	.6302	0.0000	48.895	-9.171	41.518	-.032
21	8.6199	8.6000	.8492	16.614	9.213	.3007	.5706	.5708	.2956	.6435	0.0000	50.814	-9.213	46.652	-.038

WAKE AND BOUNDARY LAYER BLOCKAGES (PERCENT)

STATION	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17
MID BLOCKAGE	0.0	0.0	0.0	1.0	1.0	1.5	2.0	2.5	2.0	4.2	3.0	5.0	7.0	9.0	11.0	12.1	12.1
DIST FACTOR	1.0	1.0	1.0	1.0	1.0	.5	.5	.2	0.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
INT BLOCKAGE	0.0	0.0	0.0	1.0	1.0	1.5	2.0	2.6	2.0	4.2	3.0	5.0	7.0	9.0	11.0	12.1	12.1

SUMMARY POINT NO. 1 THE CALCULATION IS CONVERGED PASS 22

TEST POINT TITLE = 203241115882

FLOW = 13.12 SPEED = 16694.3 PRESSURE RATIO = 1.883 ISENTROPIC EFFY = .6953 POLYTROPIC EFFY = .7214 DEL T/T = .2831

6. PHASE II WITHIN-BLADE ANALYSIS
(90% SPEED)
TEST POINT 208300315990

STATION 1 FLOW FIELD DESCRIPTION

STREAM -LINE	RADIUS	VELOCITIES MERID	VELOCITIES TANGEN	VELOCITIES TOTAL	TEMPERATURES TOTAL	TEMPERATURES STATIC	PRESSURES TOTAL	PRESSURES STATIC	MACH NO	ANGLES WHIRL	ANGLES SLOPE	RADIUS OF CURVATURE	SPECIFIC WEIGHT
1	6.0686	262.60	0.00	262.60	518.688	512.997	14.696	14.138	.2358	0.00	20.93	0.000	.0739
2	6.2267	262.60	0.00	262.60	518.688	512.997	14.696	14.138	.2358	0.00	19.77	0.000	.0739
3	6.3839	262.60	0.00	262.60	518.688	512.997	14.696	14.138	.2358	0.00	18.60	0.000	.0739
4	6.5391	262.60	0.00	262.60	518.688	512.997	14.696	14.138	.2358	0.00	17.42	0.000	.0739
5	6.6937	262.60	0.00	262.60	518.688	512.997	14.696	14.138	.2358	0.00	16.24	0.000	.0739
6	6.8472	262.60	0.00	262.60	518.688	512.997	14.696	14.138	.2358	0.00	15.06	0.000	.0739
7	6.9998	262.60	0.00	262.60	518.688	512.997	14.696	14.138	.2358	0.00	13.87	0.000	.0739
8	7.1517	262.60	0.00	262.60	518.688	512.997	14.696	14.138	.2358	0.00	12.69	0.000	.0739
9	7.3029	262.60	0.00	262.60	518.688	512.997	14.696	14.138	.2358	0.00	11.51	0.000	.0739
10	7.4534	262.60	0.00	262.60	518.688	512.997	14.696	14.138	.2358	0.00	10.34	0.000	.0739
11	7.6034	262.60	0.00	262.60	518.688	512.997	14.696	14.138	.2358	0.00	9.16	0.000	.0739
12	7.7530	262.60	0.00	262.60	518.688	512.997	14.696	14.138	.2358	0.00	8.04	0.000	.0739
13	7.9022	262.60	0.00	262.60	518.688	512.997	14.696	14.138	.2358	0.00	6.92	0.000	.0739
14	8.0512	262.60	0.00	262.60	518.688	512.997	14.696	14.138	.2358	0.00	5.84	0.000	.0739
15	8.1998	262.60	0.00	262.60	518.688	512.997	14.696	14.138	.2358	0.00	4.79	0.000	.0739
16	8.3483	262.60	0.00	262.60	518.688	512.997	14.696	14.138	.2358	0.00	3.80	0.000	.0739
17	8.4967	262.60	0.00	262.60	518.688	512.997	14.696	14.138	.2358	0.00	2.85	0.000	.0739
18	8.6451	262.60	0.00	262.60	518.688	512.997	14.696	14.138	.2358	0.00	2.00	0.000	.0739
19	8.7934	262.60	0.00	262.60	518.688	512.997	14.696	14.138	.2358	0.00	1.22	0.000	.0739
20	8.9417	262.60	0.00	262.60	518.688	512.997	14.696	14.138	.2358	0.00	.55	0.000	.0739
21	9.0900	262.60	0.00	262.60	518.688	512.997	14.696	14.138	.2358	0.00	0.00	0.000	.0739

STATION 2 FLOW FIELD DESCRIPTION

STREAM -LINE	RADIUS	VELOCITIES MERID	VELOCITIES TANGEN	VELOCITIES TOTAL	TEMPERATURES TOTAL	TEMPERATURES STATIC	PRESSURES TOTAL	PRESSURES STATIC	MACH NO	ANGLES WHIRL	ANGLES SLOPE	RADIUS OF CURVATURE	SPECIFIC WEIGHT
1	6.3746	283.85	0.00	283.85	518.688	512.033	14.696	14.046	.2551	0.00	20.83	-205.758	.0735
2	6.5143	285.15	0.00	285.15	518.688	511.973	14.696	14.040	.2563	0.00	19.62	-141.303	.0735
3	6.6528	286.34	0.00	286.34	518.688	511.922	14.696	14.035	.2574	0.00	18.42	-114.042	.0735
4	6.7902	287.43	0.00	287.43	518.688	511.870	14.696	14.030	.2584	0.00	17.21	-98.513	.0735
5	6.9267	288.43	0.00	288.43	518.688	511.822	14.696	14.025	.2593	0.00	16.01	-87.771	.0735
6	7.0624	289.32	0.00	289.32	518.688	511.780	14.696	14.021	.2601	0.00	14.80	-79.188	.0735
7	7.1974	290.11	0.00	290.11	518.688	511.742	14.696	14.018	.2608	0.00	13.59	-71.632	.0734
8	7.3318	290.77	0.00	290.77	518.688	511.710	14.696	14.014	.2614	0.00	12.37	-64.622	.0734
9	7.4658	291.28	0.00	291.28	518.688	511.686	14.696	14.012	.2619	0.00	11.15	-57.987	.0734
10	7.5994	291.63	0.00	291.63	518.688	511.663	14.696	14.011	.2622	0.00	9.95	-51.637	.0734
11	7.7327	291.79	0.00	291.79	518.688	511.662	14.696	14.010	.2623	0.00	8.74	-45.778	.0734
12	7.8660	291.72	0.00	291.72	518.688	511.665	14.696	14.010	.2623	0.00	7.54	-40.265	.0734
13	7.9994	291.41	0.00	291.41	518.688	511.680	14.696	14.012	.2620	0.00	6.35	-35.191	.0734
14	8.1330	290.82	0.00	290.82	518.688	511.703	14.696	14.014	.2615	0.00	5.18	-30.578	.0734
15	8.2669	289.93	0.00	289.93	518.688	511.750	14.696	14.018	.2607	0.00	4.03	-26.434	.0734
16	8.4015	288.70	0.00	288.70	518.688	511.803	14.696	14.024	.2595	0.00	2.92	-22.758	.0735
17	8.5367	287.10	0.00	287.10	518.688	511.885	14.696	14.031	.2581	0.00	1.84	-19.535	.0735
18	8.6730	285.07	0.00	285.07	518.688	511.981	14.696	14.041	.2562	0.00	.80	-16.738	.0735
19	8.8104	282.57	0.00	282.57	518.688	512.099	14.696	14.052	.2540	0.00	-.18	-14.332	.0736
20	8.9494	279.57	0.00	279.57	518.688	512.237	14.696	14.065	.2512	0.00	-1.08	-12.274	.0736
21	9.0900	276.00	0.00	276.00	518.688	512.401	14.696	14.081	.2480	0.00	-1.91	-10.518	.0737

STATION 3 FLOW FIELD DESCRIPTION

STREAM -LINE	RADIUS	VELOCITIES MERID	VELOCITIES TANGEN	VELOCITIES TOTAL	TEMPERATURES TOTAL	TEMPERATURES STATIC	PRESSURES TOTAL	PRESSURES STATIC	MACH NO	ANGLES WHIRL	ANGLES SLOPE	RADIUS OF CURVATURE	SPECIFIC WEIGHT
1	6.6016	307.65	0.00	307.65	518.688	510.875	14.696	13.935	.2758	0.00	20.54	-83.031	.0731
2	6.7264	309.45	0.00	309.46	518.688	510.784	14.696	13.926	.2785	0.00	19.34	-115.395	.0731
3	6.8504	311.32	0.00	311.32	518.688	510.683	14.696	13.917	.2802	0.00	18.14	-159.083	.0731
4	6.9736	313.20	0.00	313.20	518.688	510.592	14.696	13.907	.2819	0.00	16.93	-206.614	.0730
5	7.0961	315.05	0.00	315.05	518.688	510.495	14.696	13.898	.2836	0.00	15.70	-232.832	.0730
6	7.2180	316.83	0.00	316.33	518.688	510.403	14.696	13.889	.2852	0.00	14.47	-216.687	.0730
7	7.3392	318.49	0.00	318.49	518.688	510.315	14.696	13.881	.2867	0.00	13.21	-173.631	.0729
8	7.4599	319.99	0.00	319.99	518.688	510.237	14.696	13.874	.2881	0.00	11.94	-130.758	.0729
9	7.5803	321.27	0.00	321.27	518.688	510.170	14.696	13.867	.2893	0.00	10.66	-98.176	.0729
10	7.7003	322.30	0.00	322.30	518.688	510.115	14.695	13.862	.2902	0.00	9.35	-75.199	.0729
11	7.8202	323.03	0.00	323.03	518.688	510.075	14.696	13.858	.2909	0.00	8.05	-57.022	.0728
12	7.9401	323.44	0.00	323.44	518.688	510.054	14.696	13.856	.2913	0.00	6.73	-47.306	.0728
13	8.0601	323.48	0.00	323.48	518.688	510.052	14.696	13.856	.2913	0.00	5.40	-39.448	.0728
14	8.1804	323.12	0.00	323.12	518.688	510.071	14.696	13.858	.2910	0.00	4.07	-31.494	.0728
15	8.3012	322.31	0.00	322.31	518.688	510.115	14.696	13.862	.2902	0.00	2.72	-25.901	.0729
16	8.4228	320.97	0.00	320.97	518.688	510.185	14.696	13.869	.2890	0.00	1.36	-21.350	.0729
17	8.5452	319.05	0.00	319.05	518.688	510.287	14.696	13.878	.2872	0.00	-.00	-17.639	.0729
18	8.6638	316.45	0.00	316.45	518.688	510.423	14.696	13.891	.2849	0.00	-1.38	-14.619	.0730
19	8.7939	313.13	0.00	313.13	518.688	510.596	14.696	13.908	.2818	0.00	-2.75	-12.178	.0730
20	8.9209	308.95	0.00	308.95	518.688	510.810	14.696	13.928	.2780	0.00	-4.12	-10.225	.0731
21	9.0500	303.90	0.00	303.90	518.688	511.065	14.696	13.953	.2734	0.00	-5.47	-8.690	.0732

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STATION 4 FLOW FIELD DESCRIPTION

STREAM -LINE	RADIUS	VELOCITIES MERID	VELOCITIES TANGEN	VELOCITIES TOTAL	TEMPERATURES TOTAL	TEMPERATURES STATIC	PRESSURES TOTAL	PRESSURES STATIC	MACH NO	ANGLES WHIRL	ANGLES SLOPE	RADIUS OF CURVATURE	SPECIFIC WEIGHT
1	6.7500	334.52	0.00	334.52	518.688	509.452	14.696	13.799	.3014	0.00	20.32	-323.054	.0726
2	6.8657	337.43	0.00	337.43	518.688	509.291	14.696	13.784	.3041	0.00	19.27	183.767	.0726
3	6.9807	340.52	0.00	340.32	518.688	509.115	14.696	13.767	.3069	0.00	18.15	96.889	.0725
4	7.0948	343.65	0.00	343.65	518.688	508.941	14.696	13.750	.3098	0.00	17.01	75.683	.0724
5	7.2081	346.74	0.00	346.74	518.688	508.763	14.696	13.734	.3123	0.00	15.81	68.268	.0724
6	7.3207	349.72	0.00	349.72	518.688	508.594	14.696	13.718	.3154	0.00	14.57	68.761	.0723
7	7.4325	352.52	0.00	352.52	518.688	508.432	14.696	13.702	.3180	0.00	13.28	77.674	.0723
8	7.5437	355.06	0.00	355.06	518.688	508.283	14.696	13.688	.3203	0.00	11.95	99.170	.0722
9	7.6545	357.23	0.00	357.23	518.688	508.152	14.696	13.676	.3223	0.00	10.58	153.301	.0722
10	7.7649	359.15	0.00	359.15	518.688	508.042	14.696	13.665	.3241	0.00	9.19	401.560	.0721
11	7.8750	360.64	0.00	360.64	518.688	507.954	14.696	13.657	.3254	0.00	7.79	-897.211	.0721
12	7.9851	361.75	0.00	361.76	518.688	507.887	14.696	13.651	.3265	0.00	6.38	-258.360	.0721
13	8.0953	362.55	0.00	362.55	518.688	507.840	14.696	13.645	.3272	0.00	4.95	-156.816	.0720
14	8.2057	362.93	0.00	362.93	518.688	507.813	14.696	13.644	.3276	0.00	3.50	-106.816	.0720
15	8.3164	363.03	0.00	363.03	518.688	507.811	14.696	13.644	.3276	0.00	2.01	-74.595	.0720
16	8.4276	362.61	0.00	362.61	518.688	507.835	14.696	13.646	.3272	0.00	.48	-53.004	.0720
17	8.5395	361.64	0.00	361.64	518.688	507.894	14.696	13.652	.3263	0.00	-1.11	-38.317	.0721
18	8.6524	359.97	0.00	359.97	518.688	507.993	14.696	13.661	.3248	0.00	-2.77	-27.765	.0721
19	8.7665	357.42	0.00	357.42	518.688	508.145	14.696	13.675	.3225	0.00	-4.51	-19.957	.0722
20	8.8822	353.71	0.00	353.71	518.688	508.362	14.696	13.696	.3190	0.00	-6.33	-14.356	.0722
21	9.0000	348.50	0.00	348.50	518.688	508.564	14.696	13.724	.3143	0.00	-8.25	-10.317	.0723

BLADE DATA

LOCAT-ION	BLADE-ANGLES SECTION	LEAN	REL FLOW ANGLE	DEVIATION INCIDENCE	LOSS COEFF	BLADE SPEED	RELATIVE MACH NO	RELATIVE VELOCITY	RELATIVE PRESSURE	RELATIVE TEMPERATURE	PRESSURE RATIO	DELTA T ON T	ISENTROPIC EFFICIENCY	POLYTROPIC EFFICIENCY
1	-62.687	17.209	-72.790	-10.124	0.0000	1080.0	1.0187	1130.62	26.695	614.796	1.000	0.000	1.0000	1.0000
2	-62.595	16.458	-72.925	-10.330	0.0000	1098.5	1.0355	1149.18	27.205	618.113	1.000	0.000	1.0000	1.0000
3	-62.594	15.449	-73.045	-10.451	0.0000	1116.9	1.0525	1167.65	27.723	621.463	1.000	0.000	1.0000	1.0000
4	-62.658	14.169	-73.157	-10.499	0.0000	1135.2	1.0692	1186.05	28.262	624.344	1.000	0.000	1.0000	1.0000
5	-62.719	12.788	-73.266	-10.547	0.0000	1153.3	1.0859	1204.30	28.809	628.254	1.000	0.000	1.0000	1.0000
6	-62.753	11.456	-73.376	-10.623	0.0000	1171.3	1.1024	1222.40	29.368	631.595	1.000	0.000	1.0000	1.0000
7	-62.807	10.305	-73.488	-10.661	0.0000	1189.2	1.1187	1240.35	29.941	635.166	1.000	0.000	1.0000	1.0000
8	-62.911	9.381	-73.608	-10.597	0.0000	1207.0	1.1349	1258.14	30.525	638.569	1.000	0.000	1.0000	1.0000
9	-63.038	8.548	-73.737	-10.698	0.0000	1224.7	1.1510	1275.77	31.126	642.209	1.000	0.000	1.0000	1.0000
10	-63.161	7.683	-73.876	-10.715	0.0000	1242.4	1.1569	1293.25	31.742	645.787	1.000	0.000	1.0000	1.0000
11	-63.283	6.846	-74.028	-10.749	0.0000	1260.0	1.1825	1310.60	32.374	649.409	1.000	0.000	1.0000	1.0000
12	-63.412	6.151	-74.190	-10.778	0.0000	1277.5	1.1983	1327.85	33.023	653.179	1.000	0.000	1.0000	1.0000
13	-63.543	5.623	-74.363	-10.820	0.0000	1295.3	1.2135	1345.03	33.691	656.301	1.000	0.000	1.0000	1.0000
14	-63.665	5.229	-74.545	-10.881	0.0000	1312.9	1.2293	1362.16	34.380	660.581	1.000	0.000	1.0000	1.0000
15	-63.771	4.908	-74.739	-10.968	0.0000	1330.5	1.2445	1379.26	35.090	664.423	1.000	0.000	1.0000	1.0000
16	-63.867	4.562	-74.948	-11.082	0.0000	1348.4	1.2601	1396.33	35.824	668.333	1.000	0.000	1.0000	1.0000
17	-63.980	4.119	-75.175	-11.215	0.0000	1366.3	1.2755	1413.38	36.584	672.320	1.000	0.000	1.0000	1.0000
18	-64.069	3.587	-75.425	-11.355	0.0000	1384.4	1.2907	1430.42	37.372	676.393	1.000	0.000	1.0000	1.0000
19	-64.207	2.991	-75.704	-11.497	0.0000	1402.5	1.3053	1447.46	38.192	680.363	1.000	0.000	1.0000	1.0000
20	-64.353	2.386	-76.024	-11.670	0.0000	1421.2	1.3210	1464.51	39.047	684.346	1.000	0.000	1.0000	1.0000
21	-64.476	1.836	-76.395	-11.919	0.0000	1440.0	1.3363	1481.58	39.945	689.266	1.000	0.000	1.0000	1.0000

STATION 9 FLOW FIELD DESCRIPTION

STREAM-LINE	RADIUS	VELOCITIES MERID	VELOCITIES TANGEN	VELOCITIES TOTAL	TEMPERATURES TOTAL	TEMPERATURES STATIC	PRESSURES TOTAL	PRESSURES STATIC	MACH NO	ANGLES WHIRL	ANGLES SLOPE	RADIUS OF CURVATURE	SPECIFIC WEIGHT
1	6.8979	358.53	117.83	386.99	540.149	527.797	16.759	15.449	.3429	17.73	22.32	5.199	.0785
2	7.0061	372.52	117.18	390.51	540.362	527.782	16.757	15.428	.3457	17.46	21.12	6.384	.0784
3	7.1129	376.03	116.42	393.64	540.549	527.767	16.757	15.408	.3485	17.20	19.78	8.250	.0783
4	7.2184	379.10	115.59	396.33	540.715	527.759	16.756	15.390	.3509	16.96	18.33	10.484	.0782
5	7.3227	382.19	114.91	399.03	540.903	527.765	16.759	15.374	.3533	16.74	16.79	15.005	.0781
6	7.4259	385.48	114.56	402.14	541.145	527.805	16.759	15.363	.3560	16.55	15.18	27.312	.0780
7	7.5280	388.54	114.76	405.14	541.496	527.955	16.784	15.358	.3585	16.46	13.51	156.102	.0780
8	7.6292	390.97	115.64	407.72	541.979	528.267	16.804	15.359	.3608	16.48	11.79	-41.979	.0780
9	7.7298	393.02	116.74	409.99	542.511	528.645	16.831	15.369	.3627	16.54	10.03	-19.525	.0780
10	7.8298	394.52	119.14	412.11	543.313	529.305	16.855	15.388	.3643	16.80	8.26	-11.990	.0779
11	7.9297	395.19	123.96	414.17	544.637	530.483	16.905	15.415	.3658	17.42	6.50	-9.006	.0779
12	8.0295	395.85	128.98	416.34	546.027	531.730	16.958	15.451	.3672	18.05	4.78	-7.375	.0779
13	8.1295	396.74	133.07	418.65	547.373	532.913	17.019	15.493	.3699	18.62	3.10	-6.421	.0779
14	8.2294	397.78	138.19	421.10	548.704	534.079	17.038	15.543	.3715	19.16	1.45	-5.880	.0780
15	8.3294	398.83	142.80	423.68	550.005	535.282	17.165	15.598	.3725	19.70	-.17	-5.643	.0781
16	8.4294	399.85	147.96	426.35	551.608	536.618	17.246	15.657	.3744	20.31	-1.76	-5.691	.0782
17	8.5296	400.68	153.10	428.93	553.157	537.985	17.325	15.717	.3762	20.91	-3.30	-6.085	.0783
18	8.6301	401.55	156.95	431.15	554.439	539.111	17.407	15.776	.3777	21.35	-4.62	-7.037	.0785
19	8.7309	402.37	159.78	432.93	555.908	540.054	17.478	15.830	.3789	21.66	-6.33	-9.233	.0786
20	8.8321	402.82	162.37	434.32	556.539	540.385	17.537	15.876	.3798	21.95	-7.85	-15.192	.0787
21	8.9340	402.95	164.89	435.38	557.509	541.340	17.579	15.910	.3804	22.26	-9.38	-1565.883	.0787

BLADE DATA

LOCAT-ION	BLADE-ANGLES SECTION	LEAN	REL FLOW ANGLE	DEVIATION INCIDENCE	LOSS COEF	BLADE SPEED	RELATIVE MACH NO	RELATIVE VELOCITY	RELATIVE PRESSURE	RELATIVE TEMPERATURE	PRESSURE RATIO	DELTA T ON T	ISENTROPIC EFFICIENCY	POLYTROPIC EFFICIENCY
1	-60.252	10.482	-59.503	-9.251	.0233	1103.7	.9315	1052.47	27.049	619.345	1.147	.041	.9207	.9221
2	-60.378	9.962	-59.640	-9.261	.0254	1121.0	.9479	1070.69	27.504	622.212	1.140	.042	.9125	.9141
3	-60.526	9.027	-59.793	-9.268	.0273	1138.1	.9635	1088.64	27.357	625.384	1.140	.042	.9047	.9065
4	-60.690	7.796	-59.951	-9.271	.0290	1154.9	.9795	1105.33	28.439	628.565	1.140	.042	.8975	.8994
5	-60.845	6.559	-70.117	-9.272	.0304	1171.5	.9949	1123.71	28.920	631.758	1.140	.043	.8910	.8931
6	-60.977	5.515	-70.249	-9.272	.0317	1188.1	1.0039	1140.70	29.411	634.960	1.141	.043	.8854	.8875
7	-61.105	4.706	-70.376	-9.271	.0335	1204.5	1.0241	1156.92	29.898	638.171	1.142	.044	.8780	.8803
8	-61.246	4.140	-70.516	-9.270	.0363	1220.7	1.0373	1172.17	30.374	641.390	1.143	.045	.8676	.8701
9	-61.395	3.717	-70.664	-9.269	.0391	1236.3	1.0507	1185.98	30.862	644.544	1.145	.045	.8584	.8511
10	-61.544	3.301	-70.812	-9.268	.0439	1252.8	1.0612	1200.32	31.318	647.916	1.148	.047	.8430	.8460
11	-61.687	2.840	-70.955	-9.263	.0535	1268.5	1.0595	1211.08	31.692	651.224	1.150	.050	.8146	.8183
12	-61.825	2.396	-71.093	-9.268	.0625	1284.7	1.0775	1221.67	32.080	654.574	1.154	.053	.7903	.7945
13	-61.955	2.036	-71.225	-9.269	.0697	1300.7	1.0861	1232.64	32.505	657.366	1.158	.055	.7725	.7772
14	-62.079	1.793	-71.349	-9.270	.0757	1315.7	1.0948	1243.85	32.961	661.400	1.153	.053	.7592	.7643
15	-62.196	1.688	-71.467	-9.272	.0814	1332.7	1.1033	1254.98	33.430	664.377	1.168	.061	.7477	.7532
16	-62.310	1.705	-71.582	-9.272	.0873	1348.7	1.1113	1265.58	33.889	668.398	1.173	.063	.7353	.7412
17	-62.429	1.776	-71.702	-9.272	.0942	1364.7	1.1191	1275.18	34.357	671.367	1.179	.066	.7236	.7299
18	-62.563	1.833	-71.835	-9.272	.0981	1380.8	1.1284	1288.07	34.889	675.586	1.184	.069	.7173	.7240
19	-62.713	1.832	-71.984	-9.271	.1005	1397.0	1.1387	1300.96	35.467	679.258	1.189	.071	.7136	.7209
20	-62.879	1.740	-72.148	-9.270	.1037	1413.1	1.1492	1314.04	36.045	682.988	1.193	.073	.7080	.7152
21	-63.056	1.554	-72.326	-9.270	.1073	1429.4	1.1597	1327.20	36.609	685.784	1.196	.075	.6989	.7064

STATION 5 INTEGRATED PERFORMANCE PRESSURE RATIO = 1.160 ISEN. EFF.= .788 POLY. EFF.= .793 DELTA T ON T = .055

STATION 6 FLOW FIELD DESCRIPTION

STREAM-LINE	RADIUS	VELOCITIES MERID	VELOCITIES TANGEN	VELOCITIES TOTAL	TEMPERATURES TOTAL	TEMPERATURES STATIC	PRESSURES TOTAL	PRESSURES STATIC	MACH NO	ANGLES WHIRL	ANGLES SLOPE	RADIUS OF CURVATURE	SPECIFIC WEIGHT
1	7.0784	403.83	251.29	475.69	565.528	546.375	19.485	17.321	.4137	31.89	27.37	4.302	.0849
2	7.1747	411.54	248.13	480.56	565.668	546.531	19.441	17.240	.4181	31.09	25.10	5.745	.0846
3	7.2683	418.48	245.71	485.28	565.817	546.404	19.412	17.173	.4223	30.42	22.78	8.176	.0843
4	7.3598	424.28	243.64	489.25	556.008	546.275	19.392	17.121	.4258	29.87	20.42	12.933	.0840
5	7.4495	429.27	241.96	492.75	566.254	546.238	19.381	17.081	.4289	29.41	18.04	26.557	.0838
6	7.5377	433.93	240.86	496.34	566.599	546.292	19.384	17.053	.4320	29.03	15.65	256.114	.0837
7	7.6247	438.41	241.11	500.34	567.202	546.565	19.403	17.036	.4353	28.81	13.30	-41.757	.0836
8	7.7107	442.24	242.94	504.55	568.120	547.134	19.437	17.031	.4388	28.78	10.98	-22.023	.0835
9	7.7960	445.71	245.04	508.63	569.099	547.775	19.480	17.036	.4421	28.80	8.70	-16.521	.0834
10	7.8810	447.78	249.48	512.59	570.571	548.914	19.530	17.049	.4450	29.12	6.48	-14.263	.0833
11	7.9662	447.47	258.81	516.93	573.090	551.067	19.588	17.070	.4479	30.04	4.36	-13.321	.0831
12	8.0520	447.00	268.09	521.23	575.645	553.255	19.653	17.098	.4508	30.95	2.35	-13.101	.0829
13	8.1386	446.77	276.06	525.18	577.968	555.240	19.720	17.129	.4534	31.71	.47	-13.722	.0827
14	8.2259	446.57	283.00	528.70	580.108	557.075	19.787	17.163	.4557	32.36	-1.27	-14.992	.0826
15	8.3140	446.05	289.71	531.88	582.234	558.925	19.853	17.200	.4577	33.00	-2.87	-17.244	.0825
16	8.4031	444.60	297.25	534.83	584.590	561.024	19.917	17.237	.4594	33.77	-4.31	-21.156	.0824
17	8.4933	442.33	304.68	537.11	586.954	563.183	19.975	17.276	.4604	34.56	-5.59	-28.477	.0822
18	8.5849	440.14	309.04	537.80	588.675	564.851	20.020	17.315	.4603	35.07	-6.71	-43.909	.0822
19	8.6777	437.57	311.30	537.01	589.948	566.195	20.050	17.355	.4591	35.43	-7.72	-83.395	.0822
20	8.7719	433.74	313.77	535.33	591.290	567.685	20.070	17.394	.4571	35.88	-8.61	-251.088	.0822
21	8.8679	428.25	317.16	532.33	592.877	569.485	20.081	17.433	.4543	36.52	-9.35	1665.883	.0821

BLADE DATA

LOCAT-ION	BLADE-ANGLES SECTION	LEAN	REL FLOW ANGLE	DEVIATION INCIDENCE	LOSS COEFF	BLADE SPEED	RELATIVE MACH NO	RELATIVE VELOCITY	RELATIVE PRESSURE	RELATIVE TEMPERATURE	PRESSURE RATIO	DELTA T ON T	ISENTROPIC EFFICIENCY	POLYTROPIC EFFICIENCY
1	-54.598	3.782	-55.377	-10.787	.0474	1132.5	.8632	969.61	27.574	524.355	1.326	.090	.9250	.9279
2	-54.747	3.250	-55.423	-10.675	.0515	1148.0	.8609	983.47	27.955	527.243	1.323	.091	.9165	.9197
3	-54.925	2.473	-55.476	-10.551	.0551	1162.9	.8773	1009.19	28.337	530.389	1.321	.091	.9086	.9122
4	-55.150	1.515	-55.568	-10.413	.0583	1177.6	.8928	1025.79	28.720	532.304	1.320	.091	.9014	.9052
5	-55.401	.577	-55.593	-10.282	.0511	1191.3	.9075	1042.45	29.108	535.597	1.319	.092	.8945	.8988
6	-55.644	-.147	-55.799	-10.145	.0635	1206.0	.9210	1058.25	29.500	539.477	1.319	.092	.8888	.8931
7	-55.861	-.584	-55.875	-10.012	.0572	1219.9	.9332	1072.53	29.873	541.251	1.320	.094	.8811	.8857
8	-56.060	-.796	-55.945	-9.885	.0723	1233.7	.9435	1084.99	30.211	544.024	1.323	.095	.8704	.8754
9	-56.257	-.851	-56.027	-9.769	.0781	1247.5	.9574	1095.95	30.555	546.905	1.326	.097	.8605	.8659
10	-56.454	-.819	-56.121	-9.657	.0877	1261.0	.9504	1105.16	30.823	549.507	1.329	.100	.8440	.8501
11	-56.643	-.778	-56.226	-9.587	.1005	1274.5	.9519	1109.98	30.912	552.444	1.333	.105	.8135	.8210
12	-56.824	-.735	-56.340	-9.516	.1245	1288.3	.9533	1113.87	31.012	555.334	1.337	.110	.7864	.7950
13	-57.000	-.843	-56.472	-9.472	.1391	1302.2	.9562	1119.16	31.171	558.275	1.342	.114	.7649	.7744
14	-57.172	-.806	-56.624	-9.451	.1512	1316.1	.9701	1125.53	31.372	561.279	1.346	.119	.7470	.7574
15	-57.338	-.569	-56.796	-9.458	.1527	1330.2	.9742	1132.11	31.595	564.339	1.351	.123	.7304	.7416
16	-57.503	-.134	-56.990	-9.493	.1755	1344.5	.9771	1137.69	31.762	567.467	1.355	.127	.7122	.7242
17	-57.679	.424	-57.239	-9.560	.1357	1358.3	.9801	1145.29	31.941	570.570	1.359	.132	.6944	.7073
18	-57.878	1.025	-57.537	-9.600	.1907	1373.0	.9861	1151.95	32.235	573.352	1.362	.135	.6824	.6958
19	-58.100	1.594	-57.891	-9.791	.2017	1385.4	.9940	1162.52	32.607	577.314	1.364	.137	.6735	.6875
20	-58.344	2.054	-58.290	-9.953	.2077	1403.5	1.0015	1172.69	32.905	580.764	1.366	.140	.6633	.6777
21	-58.608	2.356	-58.757	-10.149	.2155	1415.9	1.0077	1182.02	33.281	584.316	1.366	.143	.6504	.6654

STATION 5 INTEGRATED PERFORMANCE PRESSURE RATIO = 1.340 ISEN. EFF.= .776 POLY. EFF.= .795 DELTA T ON T = .112

STATION 7 FLOW FIELD DESCRIPTION

STREAM-LINE	RADIUS	VELOCITIES MERID	VELOCITIES TANGEN	VELOCITIES TOTAL	TEMPERATURES TOTAL	TEMPERATURES STATIC	PRESSURES TOTAL	PRESSURES STATIC	MACH NO	ANGLES WHIRL	ANGLES SLOPE	RADIUS OF CURVATURE	SPECIFIC WEIGHT
1	7.3120	519.14	365.31	634.79	589.152	555.954	22.245	18.146	.5477	35.13	25.61	-3.372	.0875
2	7.3808	519.29	365.49	635.02	589.848	556.527	22.257	18.157	.5475	35.14	23.65	-3.377	.0875
3	7.4485	519.93	366.73	636.25	590.747	557.399	22.299	18.182	.5482	35.20	20.80	-3.434	.0875
4	7.5162	520.45	368.41	637.59	591.729	558.235	22.355	18.217	.5490	35.29	18.02	-3.545	.0875
5	7.5832	520.45	370.08	638.62	592.715	559.120	22.415	18.261	.5494	35.42	15.34	-3.713	.0876
6	7.6501	520.14	371.90	639.35	593.713	560.041	22.490	18.311	.5496	35.56	12.75	-3.920	.0877
7	7.7171	519.17	374.70	640.25	594.959	561.194	22.552	18.367	.5493	35.82	10.25	-4.178	.0878
8	7.7844	517.45	379.55	641.73	596.017	562.599	22.635	18.428	.5504	36.26	7.87	-4.450	.0878
9	7.8522	516.13	384.71	643.73	598.362	564.234	22.733	18.495	.5513	36.70	5.58	-4.742	.0879
10	7.9207	512.93	393.50	649.59	600.912	566.487	22.844	18.567	.5527	37.50	3.41	-5.057	.0879
11	7.9906	505.28	410.52	651.03	605.195	570.293	22.971	18.644	.5546	39.09	1.37	-5.407	.0877
12	8.0624	497.34	427.54	655.39	609.583	574.173	23.109	18.726	.5563	40.68	-.50	-5.803	.0874
13	8.1361	490.11	442.50	660.31	613.616	577.727	23.250	18.811	.5583	42.08	-2.20	-6.258	.0873
14	8.2117	483.28	455.94	664.37	617.379	581.057	23.390	18.899	.5607	43.33	-3.73	-6.781	.0872
15	8.2893	476.13	469.00	668.33	621.182	584.428	23.531	18.989	.5625	44.57	-5.09	-7.403	.0871
16	8.3691	467.59	484.19	673.05	625.909	588.241	23.693	19.082	.5647	46.00	-6.26	-8.236	.0870
17	8.4514	458.21	499.57	677.95	630.000	592.192	23.839	19.175	.5659	47.48	-7.20	-9.577	.0868
18	8.5360	451.03	509.93	680.73	633.414	595.297	23.971	19.269	.5673	48.51	-7.94	-12.027	.0868
19	8.6225	445.03	516.54	681.81	636.072	597.345	24.079	19.351	.5674	49.25	-8.53	-17.051	.0868
20	8.7111	437.97	523.90	682.85	638.960	600.320	24.151	19.449	.5670	50.11	-9.02	-31.922	.0868
21	8.8019	429.05	533.45	684.58	642.421	603.893	24.283	19.533	.5669	51.19	-9.37	*955875.344	.0867

BLADE DATA

LOCAT-ION	BLADE-ANGLES SECTION	LEAN	REL FLOW ANGLE	DEVIATION INCIDENCE	LOSS COEF.	BLADE SPEED	RELATIVE MACH NO	RELATIVE VELOCITY	RELATIVE PRESSURE	RELATIVE TEMPERATURE	PRESSURE RATIO	DELTA T ON T	ISENTROPIC EFFICIENCY	POLYTROPIC EFFICIENCY
1	-42.577	-5.962	-57.170	-14.593	.0727	1169.9	.8261	957.55	28.387	631.428	1.514	.136	.9229	.9273
2	-43.135	-5.846	-57.510	-14.375	.0785	1180.9	.8336	966.75	28.621	633.554	1.515	.137	.9151	.9199
3	-43.634	-5.698	-57.783	-14.149	.0835	1191.8	.8403	975.23	28.858	635.576	1.517	.139	.9079	.9132
4	-44.119	-5.494	-58.040	-13.921	.0880	1202.6	.8465	983.23	29.102	637.797	1.521	.141	.9014	.9071
5	-44.622	-5.217	-58.316	-13.694	.0919	1213.3	.8525	990.92	29.353	639.326	1.525	.143	.8955	.9015
6	-45.129	-4.860	-58.603	-13.474	.0953	1224.0	.8583	998.42	29.611	642.169	1.530	.145	.8899	.8963
7	-45.617	-4.417	-58.883	-13.265	.1007	1234.7	.8527	1004.59	29.839	644.234	1.535	.147	.8824	.8892
8	-45.069	-3.883	-59.140	-13.071	.1091	1245.5	.8652	1008.79	30.015	646.427	1.540	.150	.8715	.8791
9	-45.474	-3.279	-59.369	-12.895	.1169	1256.4	.8575	1011.00	30.201	648.556	1.547	.154	.8614	.8697
10	-46.840	-2.664	-59.582	-12.742	.1313	1267.3	.8560	1015.18	30.268	650.327	1.554	.159	.8446	.8539
11	-47.179	-2.093	-53.795	-12.615	.1599	1278.5	.8555	1004.34	30.063	653.263	1.563	.157	.8134	.8248
12	-47.510	-1.647	-50.030	-12.519	.1867	1290.0	.8453	995.57	29.872	655.583	1.572	.175	.7852	.7984
13	-47.845	-1.285	-60.301	-12.455	.2085	1301.8	.8374	989.23	29.763	658.192	1.582	.183	.7625	.7773
14	-48.182	-.929	-60.610	-12.428	.2268	1313.0	.8312	984.78	29.715	660.789	1.592	.190	.7436	.7598
15	-48.511	-.484	-50.953	-12.442	.2442	1325.3	.8254	980.63	29.678	663.479	1.601	.198	.7259	.7434
16	-48.828	.097	-51.327	-12.499	.2639	1339.1	.8174	974.36	29.583	665.270	1.612	.205	.7067	.7255
17	-49.141	.775	-51.744	-12.603	.2833	1352.2	.8093	967.88	29.486	669.176	1.622	.215	.6881	.7084
18	-49.454	1.491	-52.210	-12.756	.2954	1365.8	.8068	967.40	29.556	672.193	1.631	.221	.6757	.6970
19	-49.766	2.173	-52.723	-12.957	.3023	1379.5	.8082	971.05	29.736	675.311	1.638	.225	.6568	.6890
20	-50.073	2.734	-63.276	-13.203	.3118	1393.8	.8087	973.91	29.887	678.531	1.645	.232	.6568	.6797
21	-50.376	3.083	-53.876	-13.499	.3237	1408.3	.8069	974.40	29.963	681.369	1.652	.239	.6442	.6681

STATION 7 INTEGRATED PERFORMANCE PRESSURE RATIO = 1.576 ISEN. EFF.= .771 POLY. EFF.= .785 DELTA T ON T = .179

STATION 8 FLOW FIELD DESCRIPTION

STREAM-LINE	RADIUS	VELOCITIES MERID	VELOCITIES TANGEN	VELOCITIES TOTAL	TEMPERATURES TOTAL	TEMPERATURES STATIC	PRESSURES TOTAL	PRESSURES STATIC	MACH NO	ANGLES WHIRL	ANGLES SLOPE	RADIUS OF CURVATURE	SPECIFIC WEIGHT
1	7.4792	660.82	529.38	846.72	523.067	564.051	26.827	18.909	.7253	38.70	16.55	-1.883	.0899
2	7.5252	649.29	531.31	838.97	524.091	566.155	26.852	19.065	.7173	39.29	14.44	-2.124	.0903
3	7.5722	639.29	533.48	832.64	525.179	568.117	26.899	19.206	.7107	39.84	12.39	-2.417	.0906
4	7.6201	630.81	535.86	827.69	526.327	569.345	26.940	19.336	.7053	40.35	10.43	-2.774	.0910
5	7.6690	623.75	538.42	823.99	527.532	571.557	27.004	19.455	.7011	40.80	8.53	-3.212	.0912
6	7.7187	617.90	541.13	821.35	528.788	573.272	27.079	19.566	.6979	41.21	6.68	-3.759	.0915
7	7.7694	611.85	545.26	819.53	530.354	575.082	27.159	19.669	.6953	41.71	4.88	-4.457	.0917
8	7.8212	604.75	551.55	818.52	532.396	577.272	27.239	19.766	.6931	42.37	3.12	-5.365	.0918
9	7.8742	598.30	557.89	818.05	534.471	579.415	27.326	19.858	.6915	43.00	1.40	-6.559	.0919
10	7.9287	588.33	569.04	818.50	537.595	582.485	27.415	19.948	.6900	44.05	-.27	-8.126	.0918
11	7.9854	569.44	591.68	821.19	543.196	587.737	27.519	20.033	.6892	46.10	-1.88	-10.101	.0914
12	8.0451	550.38	615.56	825.74	549.172	593.114	27.663	20.131	.6899	48.20	-3.39	-12.532	.0910
13	8.1079	533.46	637.73	831.43	554.908	598.085	27.844	20.229	.6915	50.09	-4.75	-15.625	.0907
14	8.1738	517.97	658.60	837.88	560.491	602.500	28.052	20.333	.6945	51.82	-6.01	-19.574	.0904
15	8.2427	501.95	680.16	845.33	566.350	607.644	28.290	20.444	.6979	53.57	-7.10	-24.874	.0902
16	8.3153	482.40	706.06	855.12	573.297	613.243	28.579	20.564	.7028	55.66	-8.05	-26.435	.0899
17	8.3923	461.17	734.09	866.93	680.893	619.191	28.927	20.697	.7091	57.36	-8.81	-28.437	.0896
18	8.4733	445.80	754.87	876.57	587.069	623.991	29.271	20.845	.7143	59.44	-9.35	-25.142	.0896
19	8.5577	434.79	770.87	885.04	692.329	628.058	29.617	21.005	.7183	60.58	-9.70	-23.712	.0897
20	8.6450	427.51	790.01	895.89	598.425	632.583	30.024	21.174	.7251	61.86	-9.79	-28.642	.0897
21	8.7359	406.33	814.50	910.25	705.912	637.372	30.505	21.345	.7336	63.48	-9.37	*516564.766	.0897

BLADE DATA

LOCAT-ION	BLADE-ANGLES SECTION	LEAN	REL FLOW ANGLE	DEVIATION INCIDENCE	LOSS COEFF	BLADE SPEED	RELATIVE MACH NO	RELATIVE VELOCITY	RELATIVE PRESSURE	RELATIVE TEMPERATURE	PRESSURE RATIO	DELTA T ON T	ISENTROPIC EFFICIENCY	POLYTROPIC EFFICIENCY
1	-25.429	-6.278	-45.279	-19.850	.0969	1196.7	.8049	939.13	28.940	636.531	1.825	.201	.9289	.9346
2	-25.517	-5.912	-46.016	-19.499	.1040	1204.0	.7394	934.95	29.032	638.383	1.827	.203	.9214	.9277
3	-27.538	-5.424	-46.667	-19.149	.1107	1211.5	.7954	931.92	29.133	639.574	1.830	.205	.9142	.9212
4	-28.487	-4.827	-47.290	-18.803	.1165	1219.2	.7925	930.01	29.245	641.105	1.833	.208	.9075	.9150
5	-29.385	-4.147	-47.330	-18.469	.1215	1227.0	.7905	929.12	29.379	642.576	1.838	.210	.9013	.9093
6	-30.176	-3.417	-48.314	-18.139	.1264	1235.0	.7895	929.12	29.504	644.285	1.843	.212	.8954	.9040
7	-30.927	-2.671	-48.795	-17.878	.1335	1243.1	.7874	926.11	29.598	645.336	1.848	.215	.8875	.8967
8	-31.632	-1.944	-49.168	-17.536	.1449	1251.4	.7832	924.92	29.622	647.534	1.854	.219	.8761	.8863
9	-32.292	-1.294	-49.559	-17.287	.1554	1259.9	.7795	922.36	29.657	649.382	1.859	.223	.8652	.8764
10	-32.909	-.611	-49.936	-17.026	.1747	1268.5	.7705	914.06	29.531	651.191	1.865	.229	.8472	.8599
11	-33.487	-.020	-50.304	-16.818	.2129	1277.7	.7483	891.54	29.039	653.188	1.873	.240	.8143	.8299
12	-34.030	.505	-50.658	-16.639	.2483	1287.2	.7255	869.36	28.564	655.100	1.882	.252	.7848	.8022
13	-34.538	.993	-51.033	-16.495	.2781	1297.3	.7059	848.28	28.194	657.231	1.895	.263	.7594	.7798
14	-35.024	1.334	-51.416	-16.391	.3027	1307.8	.6884	830.52	27.902	659.484	1.909	.273	.7387	..611
15	-35.503	1.673	-51.835	-16.332	.3260	1318.5	.6705	812.33	27.623	661.362	1.925	.285	.7194	.7437
16	-35.991	2.005	-52.311	-16.320	.3525	1330.5	.6485	789.04	27.267	664.387	1.945	.298	.6987	.7252
17	-36.493	2.351	-52.850	-16.357	.3735	1342.8	.6245	763.69	26.909	667.185	1.968	.313	.6792	.7078
18	-36.982	2.687	-53.428	-16.446	.3945	1355.7	.6095	748.18	26.778	669.356	1.992	.325	.6668	.6978
19	-37.412	2.985	-53.996	-16.584	.4044	1369.2	.6007	739.64	26.795	672.971	2.015	.335	.6586	.6900
20	-37.770	3.213	-54.539	-16.759	.4160	1383.2	.5994	729.28	26.773	675.124	2.043	.347	.5499	.6826
21	-38.132	3.347	-55.132	-17.000	.4315	1397.7	.5723	710.87	26.652	679.441	2.076	.361	.6392	.6736

STATION 8 INTEGRATED PERFORMANCE PRESSURE RATIO = 1.906 ISEN. EFF.= .768 POLY. EFF.= .788 DELTA T ON T = .252

STATION 9 FLOW FIELD DESCRIPTION

STREAM-LINE	RADIUS	VELOCITIES MERID	VELOCITIES TANGEN	VELOCITIES TOTAL	TEMPERATURES TOTAL	TEMPERATURES STATIC	PRESSURES TOTAL	PRESSURES STATIC	MACH NO	ANGLES WHIRL	ANGLES SLOPE	RADIUS OF CURVATURE	SPECIFIC WEIGHT
1	7.5499	702.85	727.34	1011.45	563.330	579.223	33.139	20.564	.8551	45.98	8.54	-5.825	.0952
2	7.5867	694.27	728.62	1006.43	564.289	581.020	33.102	20.660	.8495	46.38	7.75	-9.523	.0953
3	7.6246	687.35	729.71	1002.47	565.231	582.522	33.066	20.734	.8450	46.71	7.02	-21.629	.0954
4	7.6634	682.02	730.55	999.43	566.144	584.039	33.039	20.789	.8415	46.97	6.24	157.532	.0954
5	7.7032	678.15	731.16	997.23	567.025	585.233	32.996	20.826	.8387	47.15	5.44	18.435	.0954
6	7.7438	675.02	731.57	995.82	567.894	586.383	32.962	20.847	.8367	47.28	4.62	10.122	.0953
7	7.7854	672.39	733.41	994.99	569.069	587.705	32.916	20.853	.8351	47.49	3.80	7.086	.0951
8	7.8280	667.11	737.63	994.59	570.764	589.474	32.849	20.844	.8335	47.88	2.96	5.495	.0948
9	7.8718	662.90	741.77	994.81	572.458	591.136	32.752	20.823	.8326	48.21	2.11	4.507	.0944
10	7.9169	652.82	751.62	995.54	575.394	593.354	32.644	20.789	.8312	49.02	1.25	3.832	.0938
11	7.9643	626.33	774.77	996.31	581.155	599.523	32.511	20.749	.8280	51.05	.37	3.357	.0928
12	8.0150	597.30	798.19	996.93	587.105	605.497	32.334	20.709	.8245	53.19	-.53	3.070	.0917
13	8.0694	572.63	821.76	1001.60	593.228	610.879	32.285	20.674	.8247	55.13	-1.43	2.836	.0907
14	8.1275	550.92	845.41	1009.03	599.514	615.957	32.330	20.645	.8275	56.91	-2.33	2.712	.0899
15	8.1896	526.37	869.20	1016.15	705.990	621.284	32.377	20.628	.8298	58.80	-3.23	2.658	.0890
16	8.2560	505.59	914.54	1044.95	717.297	627.770	33.021	20.629	.8489	61.07	-4.15	2.659	.0881
17	8.3273	478.17	964.28	1076.33	729.836	634.905	33.787	20.658	.8695	63.62	-5.12	2.722	.0872
18	8.4041	455.93	998.11	1097.31	739.199	640.578	34.360	20.719	.8826	65.45	-6.11	2.906	.0867
19	8.4857	438.01	1020.93	1110.93	746.385	645.342	34.801	20.813	.8903	66.78	-7.09	3.308	.0865
20	8.5730	411.21	1046.97	1124.82	754.939	650.998	35.301	20.949	.8975	68.56	-8.03	4.421	.0863
21	8.6699	364.85	1079.94	1139.91	764.642	658.359	35.921	21.157	.9045	71.33	-8.95	20.749	.0862

BLADE DATA

LOCAT-ION	BLADE-ANGLES SECTION	BLADE-ANGLES LEAN	REL FLOW ANGLE	DEVIATION INCIDENCE	LOSS COEFF	BLADE SPEED	RELATIVE MACH NO	RELATIVE VELOCITY	RELATIVE PRESSURE	RELATIVE TEMPERATURE	PRESSURE RATIO	DELTA T ON T	ISENTROPIC EFFICIENCY	POLYTROPIC EFFICIENCY
1	-11.816	2.399	-34.366	-22.550	.1187	1208.0	.7195	851.48	29.028	638.865	2.255	.279	.9334	.9405
2	-12.739	2.597	-34.951	-22.212	.1233	1213.9	.7150	847.04	29.035	640.037	2.252	.281	.9258	.9338
3	-13.679	2.830	-35.496	-21.[illegible]	.1369	1219.[illegible]	.7117	844.26	29.052	641.248	2.250	.283	.9185	.9272
4	-14.622	3.088	-36.004	-21.382	.1445	1225.1	.7098	843.07	29.079	642.496	2.248	.284	.9114	.9208
5	-15.551	3.362	-36.476	-20.924	.1512	1232.5	.7093	[illegible]	29.117	643.781	2.245	.286	.9046	.9148
6	-16.451	3.638	-36.910	-20.459	.1571	1239.0	.7100	[illegible]	29.164	645.102	2.243	.288	.8981	.9089
7	-17.305	3.901	-37.302	-19.997	.1663	1245.7	.7095	845.29	29.158	646.459	2.240	.290	.8893	.9010
8	-18.100	4.137	-37.658	-19.558	.1805	1252.5	.7052	842.66	29.061	647.858	2.235	.293	.8769	.8899
9	-18.832	4.340	-37.990	-19.158	.1939	1259.5	.7039	841.12	28.972	649.302	2.231	.296	.8648	.8790
10	-19.509	4.512	-38.274	-18.765	.2180	1266.7	.6943	831.56	28.677	650.800	2.224	.302	.8450	.8612
11	-20.148	4.656	-38.571	-18.423	.2560	1274.3	.6658	801.17	27.920	652.382	2.212	.313	.8088	.8287
12	-20.766	4.776	-39.031	-18.265	.3111	1282.4	.6359	765.92	27.176	654.184	2.200	.325	.7741	.7974
13	-21.372	4.870	-39.340	-17.967	.3473	1291.1	.6097	740.40	26.559	655.323	2.197	.337	.7453	.7719
14	-21.967	4.936	-39.553	-17.586	.3788	1300.4	.5859	714.52	26.036	657.300	2.200	.349	.7207	.7494
15	-22.565	4.961	-39.966	-17.421	.4081	1310.3	.5608	686.78	25.527	660.028	2.203	.361	.6971	.7282
16	-23.094	4.925	-38.799	-15.705	.4412	1321.0	.5269	648.62	24.915	662.321	2.247	.383	.6755	.7096
17	-23.603	4.809	-37.559	-13.985	.4739	1332.4	.4975	603.44	24.295	664.506	2.299	.407	.6554	.6925
18	-24.061	4.592	-37.238	-13.177	.4939	1344.7	.4605	572.68	23.955	667.502	2.338	.425	.6417	.6809
19	-24.449	4.297	-37.557	-13.108	.5062	1357.7	.4428	552.52	23.805	670.398	2.368	.439	.6315	.6726
20	-24.752	3.958	-38.298	-13.546	.5205	1371.7	.4181	523.96	23.61?	673.524	2.402	.455	.6212	.6638
21	-24.964	3.617	-40.101	-15.137	.5395	1387.2	.3785	477.00	23.349	677.330	2.444	.474	.6089	.6536

STATION 9 INTEGRATED PERFORMANCE PRESSURE RATIO = 2.262 ISEN. EFF.= .757 POLY. EFF.= .783 DELTA T ON T = .345

STATION 10 FLOW FIELD DESCRIPTION

STREAM-LINE	RADIUS	VELOCITIES MERID	VELOCITIES TANGEN	VELOCITIES TOTAL	TEMPERATURES TOTAL	TEMPERATURES STATIC	PRESSURES TOTAL	PRESSURES STATIC	MACH NO	ANGLES WHIRL	ANGLES SLOPE	RADIUS OF CURVATURE	SPECIFIC WEIGHT
1	7.5746	716.75	724.97	1019.46	663.330	577.882	33.139	20.398	.8628	45.33	7.82	9.349	.0946
2	7.6139	721.10	726.03	1023.23	664.289	578.203	33.102	20.311	.8658	45.20	7.70	9.676	.0942
3	7.6537	725.95	726.94	1027.35	665.231	578.462	33.066	20.219	.8691	45.04	7.53	10.002	.0937
4	7.6941	730.98	727.64	1031.41	666.144	578.591	33.030	20.128	.8723	44.87	7.31	10.201	.0933
5	7.7348	735.90	728.17	1035.27	667.029	578.922	32.996	20.041	.8754	44.70	7.07	10.193	.0928
6	7.7758	740.45	728.56	1038.75	667.894	579.190	32.962	19.961	.8782	44.54	6.82	10.038	.0924
7	7.8172	742.70	730.44	1041.70	669.069	579.870	32.916	19.892	.8802	44.52	6.56	9.794	.0920
8	7.8590	741.52	734.77	1043.90	670.764	581.194	32.849	19.834	.8810	44.74	6.28	9.494	.0915
9	7.9015	739.75	738.98	1045.63	672.456	582.598	32.782	19.785	.8814	44.97	6.00	9.147	.0911
10	7.9449	731.52	748.98	1046.94	675.384	585.310	32.684	19.745	.8805	45.68	5.70	8.766	.0904
11	7.9900	708.10	772.28	1047.77	681.155	590.964	32.511	19.715	.8770	47.48	5.37	8.352	.0894
12	8.0378	681.65	795.93	1047.93	687.105	596.914	32.334	19.696	.8728	49.42	4.98	7.890	.0885
13	8.0883	658.31	819.84	1051.44	693.228	602.461	32.285	19.689	.8717	51.24	4.49	7.406	.0876
14	8.1415	636.55	843.95	1057.11	699.514	607.793	32.330	19.699	.8726	52.97	3.90	6.938	.0869
15	8.1977	611.24	868.33	1061.89	705.990	613.463	32.377	19.729	.8725	54.86	3.19	6.507	.0862
16	8.2572	587.75	914.39	1087.09	717.297	620.400	33.021	19.769	.8852	57.27	2.28	6.126	.0855
17	8.3208	556.83	965.02	1114.17	729.835	628.095	33.757	19.888	.9049	60.01	1.15	5.781	.0849
18	8.3895	528.02	999.83	1130.69	739.199	634.469	34.360	20.032	.9133	62.16	-.24	5.456	.0847
19	8.4639	500.77	1023.56	1139.49	746.386	640.063	34.801	20.220	.9169	63.93	-1.89	5.107	.0847
20	8.5459	454.95	1050.28	1148.53	754.539	646.561	35.301	20.450	.9196	66.12	-3.83	4.519	.0848
21	8.6399	416.25	1083.69	1160.83	764.642	654.408	35.921	20.711	.9239	68.99	-6.18	3.053	.0849

STATION 11 FLOW FIELD DESCRIPTION

STREAM -LINE	RADIUS	------VELOCITIES------- MERID	TANGEN	TOTAL	--TEMPERATURES-- TOTAL	STATIC	---PRESSURES--- TOTAL	STATIC	MACH NO	---ANGLES--- WHIRL	SLOPE	RADIUS OF CURVATURE	SPECIFIC WEIGHT
1	7.6199	826.55	720.85	1096.51	553.330	554.595	33.139	18.774	.9392	41.08	9.05	26.357	.0892
2	7.6667	845.20	721.02	1110.95	554.289	562.755	33.112	18.472	.9527	40.47	3.90	37.943	.0880
3	7.7129	859.54	721.36	1122.12	555.231	561.575	33.066	18.233	.9632	40.00	8.70	57.480	.0870
4	7.7579	869.40	721.66	1129.83	556.144	561.153	33.036	18.066	.9703	39.69	8.45	95.448	.0863
5	7.8017	875.32	721.95	1134.82	557.029	561.160	32.998	17.985	.9744	39.51	8.22	224.183	.0858
6	7.8446	878.13	722.18	1137.00	557.894	561.583	32.952	17.911	.9761	39.43	7.99	2534.980	.0855
7	7.8871	877.52	723.97	1137.62	569.069	562.547	32.915	17.893	.9757	39.52	7.79	-924.736	.0853
8	7.9293	873.15	723.23	1135.99	570.764	564.469	32.849	17.900	.9735	39.83	7.63	2118.900	.0850
9	7.9716	867.75	732.43	1135.60	572.458	566.432	32.792	17.923	.9707	40.17	7.49	213.834	.0848
10	8.0142	857.05	742.52	1133.95	575.384	569.579	32.634	17.954	.9565	40.90	7.39	91.246	.0845
11	8.0575	834.23	755.33	1132.49	581.155	575.753	32.511	17.989	.9603	42.55	7.25	54.821	.0838
12	8.1022	809.32	789.61	1130.70	587.105	582.068	32.334	18.027	.9535	44.29	7.07	39.502	.0830
13	8.1483	787.09	813.31	1132.17	593.228	587.959	32.295	18.072	.9501	45.96	6.81	29.287	.0824
14	8.1957	766.25	833.38	1135.73	599.514	593.594	32.330	18.127	.9480	47.57	6.44	23.248	.0819
15	8.2445	742.43	863.41	1138.72	705.390	599.559	32.377	18.200	.9454	49.31	5.92	19.038	.0814
16	8.2951	720.03	910.22	1150.58	717.297	606.797	33.021	18.304	.9588	51.65	5.18	16.558	.0809
17	8.3480	599.64	961.57	1133.55	729.836	514.937	33.737	18.465	.9713	54.36	4.11	15.837	.0805
18	8.4043	655.95	998.07	1194.34	739.199	622.306	34.360	18.712	.9745	56.69	2.65	15.691	.0806
19	8.4651	615.13	1023.40	1194.07	745.385	629.595	34.801	19.079	.9587	58.99	.89	20.150	.0813
20	8.5342	552.95	1051.72	1188.22	754.539	638.955	35.301	19.615	.9569	62.27	-1.50	41.146	.0823
21	8.6199	454.42	1085.20	1177.42	764.542	651.232	35.921	20.359	.9394	67.30	-4.27	-27.461	.0838

BLADE DATA

LOCAT -ION	BLADE-ANGLES SECTION	LEAN	REL FLOW ANGLE	DEVIATION INCIDENCE	LOSS COEFF	BLADE SPEED	RELATIVE MACH NO	RELATIVE VELOCITY	RELATIVE PRESSURE	RELATIVE TEMPERATURE	PRESSURE RATIO	DELTA T ON T	ISENTROPIC EFFICIENCY	POLYTROPIC EFFICIENCY
1	48.817	-39.941	41.075	-7.742	0.0000	0.0	.9392	1095.81	33.139	653.330	2.255	.279	.9334	.9405
2	47.972	-37.356	40.467	-7.505	0.0000	0.0	.9527	1110.96	33.102	654.289	2.252	.281	.9258	.9338
3	47.110	-34.527	40.005	-7.105	0.0000	0.0	.9632	1122.12	33.065	665.231	2.250	.283	.9185	.9272
4	46.449	-31.532	39.695	-6.754	0.0000	0.0	.9703	1123.89	33.030	666.144	2.248	.284	.9114	.9208
5	45.941	-28.430	39.515	-6.426	0.0000	0.0	.9744	1134.62	32.995	667.129	2.245	.285	.9045	.9148
6	45.553	-25.271	39.432	-6.121	0.0000	0.0	.9761	1137.00	32.962	667.394	2.243	.288	.8981	.9089
7	45.223	-22.114	39.523	-5.791	0.0000	0.0	.9757	1137.62	32.915	669.065	2.240	.290	.8893	.9010
8	44.952	-18.938	39.830	-5.122	0.0000	0.0	.9735	1135.99	32.849	670.764	2.235	.293	.8769	.8899
9	44.737	-15.828	40.168	-4.569	0.0000	0.0	.9707	1135.60	32.792	672.456	2.231	.296	.8648	.8790
10	44.586	-12.419	40.904	-3.682	0.0000	0.0	.9565	1133.96	32.634	675.384	2.224	.302	.8450	.8612
11	44.505	-8.596	42.550	-1.955	0.0000	0.0	.9503	1132.49	32.511	681.155	2.212	.313	.8008	.8287
12	44.524	-4.521	44.294	-.230	0.0000	0.0	.9535	1130.70	32.334	687.105	2.200	.325	.7741	.7974
13	44.686	-.589	45.956	1.279	0.0000	0.0	.9501	1132.17	32.295	693.228	2.197	.337	.7453	.7715
14	44.990	2.991	47.574	2.584	0.0000	0.0	.9485	1135.73	32.330	699.514	2.200	.349	.7207	.7494
15	45.342	6.952	49.308	3.956	0.0000	0.0	.9454	1138.72	32.377	705.390	2.203	.361	.6971	.7282
16	45.631	12.358	51.554	6.023	0.0000	0.0	.9588	1160.58	33.021	717.297	2.247	.383	.6755	.7096
17	45.949	19.484	54.360	8.411	0.0000	0.0	.9713	1183.55	33.737	729.836	2.299	.407	.6554	.6925
18	46.572	27.404	56.685	10.113	0.0000	0.0	.9745	1194.34	34.360	739.199	2.338	.425	.6417	.6809
19	47.669	35.005	58.989	11.320	0.0000	0.0	.9597	1194.07	34.801	746.386	2.368	.439	.6318	.6726
20	49.049	41.649	62.256	13.217	0.0000	0.0	.9569	1188.22	35.301	754.539	2.402	.455	.6212	.6638
21	50.814	46.652	67.298	15.084	0.0000	0.0	.9394	1177.42	35.921	764.542	2.444	.474	.6089	.6536

STATION 11 INTEGRATED PERFORMANCE PRESSURE RATIO = 2.262 ISEN. EFF.= .757 POLY. EFF.= .783 DELTA T ON T = .345

STATION 12 FLOW FIELD DESCRIPTION

STREAM -LINE	RADIUS	VELOCITIES MERID	VELOCITIES TANGEN	VELOCITIES TOTAL	TEMPERATURES TOTAL	TEMPERATURES STATIC	PRESSURES TOTAL	PRESSURES STATIC	MACH NO	ANGLES WHIRL	ANGLES SLOPE	RADIUS OF CURVATURE	SPECIFIC WEIGHT
1	7.7150	937.95	604.65	1115.97	653.330	560.303	32.376	17.947	.9586	32.81	5.21	-3.638	.0858
2	7.7539	921.34	586.79	1092.33	654.289	566.163	32.352	18.437	.9339	32.49	4.82	-3.443	.0873
3	7.7929	904.24	567.76	1067.70	655.231	571.497	32.325	18.943	.9087	32.12	4.44	-3.246	.0889
4	7.8321	886.82	548.65	1042.82	656.144	576.741	32.291	19.446	.8835	31.74	4.08	-3.104	.0904
5	7.8714	869.05	530.94	1018.43	657.029	581.770	32.251	19.928	.8591	31.42	3.76	-3.017	.0918
6	7.9109	850.92	515.66	994.97	667.894	586.528	32.192	20.377	.8359	31.22	3.49	-2.959	.0931
7	7.9508	833.29	502.92	973.29	669.069	591.220	32.123	20.781	.8145	31.11	3.31	-2.947	.0942
8	7.9912	816.93	491.60	953.43	670.764	595.064	32.040	21.141	.7947	31.04	3.21	-2.941	.0951
9	8.0323	802.44	481.35	935.74	672.458	600.523	31.968	21.462	.7770	30.96	3.20	-2.947	.0958
10	8.0740	789.42	472.26	919.90	675.384	605.875	31.882	21.747	.7605	30.89	3.24	-2.966	.0962
11	8.1166	777.13	464.55	905.40	681.155	613.845	31.743	22.000	.7437	30.67	3.31	-3.019	.0961
12	8.1603	765.64	458.62	892.49	687.105	621.727	31.612	22.221	.7285	30.92	3.39	-3.120	.0958
13	8.2047	759.03	456.75	885.35	693.228	628.541	31.603	22.413	.7191	31.04	3.44	-3.235	.0956
14	8.2498	755.83	457.61	883.61	699.514	635.475	31.677	22.576	.7135	31.19	3.45	-3.537	.0953
15	8.2953	754.35	459.81	883.44	705.390	642.001	31.750	22.705	.7093	31.36	3.39	-3.932	.0948
16	8.3408	772.01	475.34	906.61	717.297	649.947	32.238	22.794	.7240	31.62	3.19	-4.636	.0940
17	8.3860	793.85	496.72	936.45	729.836	658.027	32.922	22.832	.7433	32.03	2.80	-6.147	.0930
18	8.4310	810.71	518.73	962.49	739.199	663.375	33.407	22.787	.7609	32.62	2.14	-10.514	.0921
19	8.4767	826.55	542.13	988.50	746.385	666.437	33.762	22.617	.7797	33.26	1.20	-61.301	.0910
20	8.5237	848.71	570.40	1022.58	754.539	669.014	34.134	22.303	.8051	33.90	-.14	13.855	.0894
21	8.5730	876.64	603.79	1064.45	764.542	672.013	34.539	21.869	.8362	34.56	-2.03	5.947	.0873

BLADE DATA

LOCAT -ION	BLADE-ANGLES SECTION	BLADE-ANGLES LEAN	REL FLOW ANGLE	DEVIATION INCIDENCE	LOSS COEFF	BLADE SPEED	RELATIVE MACH NO	RELATIVE VELOCITY	RELATIVE PRESSURE	RELATIVE TEMPERATURE	PRESSURE RATIO	DELTA T ON T	ISENTROPIC EFFICIENCY	POLYTROPIC EFFICIENCY
1	31.959	-24.847	32.808	.849	.0531	0.0	.9583	1115.97	32.376	663.330	2.203	.279	.9036	.9136
2	31.631	-23.359	32.493	.862	.0513	0.0	.9339	1092.33	32.352	664.289	2.201	.281	.8967	.9074
3	31.247	-21.380	32.124	.877	.0503	0.0	.9087	1067.70	32.325	655.231	2.200	.283	.8898	.9012
4	30.849	-19.085	31.744	.895	.0494	0.0	.8835	1042.82	32.291	656.144	2.197	.284	.8830	.8951
5	30.507	-16.698	31.422	.915	.0495	0.0	.8591	1018.43	32.250	657.029	2.194	.286	.8761	.8889
6	30.279	-14.423	31.216	.937	.0512	0.0	.8359	994.97	32.192	667.394	2.191	.288	.8688	.8823
7	30.153	-12.267	31.112	.959	.0523	0.0	.8145	973.29	32.123	669.069	2.186	.290	.8593	.8738
8	30.056	-10.146	31.037	.980	.0541	0.0	.7947	953.48	32.040	670.764	2.180	.293	.8466	.8623
9	29.959	-7.977	30.958	.999	.0548	0.0	.7770	935.74	31.969	672.458	2.175	.296	.8345	.8514
10	29.873	-5.763	30.889	1.015	.0544	0.0	.7605	919.90	31.882	675.384	2.169	.302	.8158	.8345
11	29.840	-3.559	30.870	1.030	.0529	0.0	.7437	905.40	31.743	681.155	2.160	.313	.7817	.8036
12	29.882	-1.413	30.922	1.040	.0505	0.0	.7285	892.49	31.612	687.105	2.151	.325	.7495	.7746
13	29.991	.767	31.038	1.045	.0475	0.0	.7191	885.35	31.603	693.228	2.151	.337	.7230	.7507
14	30.142	3.171	31.190	1.048	.0460	0.0	.7135	883.61	31.677	699.514	2.156	.349	.6999	.7300
15	30.319	5.981	31.364	1.045	.0442	0.0	.7093	883.44	31.750	705.390	2.150	.361	.6779	.7102
16	30.581	9.210	31.621	1.040	.0498	0.0	.7240	905.61	32.238	717.297	2.197	.383	.6546	.6899
17	30.999	12.811	32.034	1.036	.0565	0.0	.7433	935.45	32.922	729.836	2.240	.407	.6326	.6709
18	31.586	16.718	32.616	1.030	.0509	0.0	.7609	962.49	33.407	739.199	2.273	.425	.6179	.6583
19	32.220	20.725	33.260	1.041	.0561	0.0	.7797	988.50	33.762	745.386	2.297	.439	.6069	.6490
20	32.851	24.587	33.904	1.053	.0744	0.0	.8051	1022.58	34.134	754.539	2.323	.455	.5944	.6383
21	33.478	28.225	34.557	1.079	.0885	0.0	.8362	1064.45	34.533	764.542	2.350	.474	.5788	.6249

STATION 12 INTEGRATED PERFORMANCE PRESSURE RATIO = 2.207 ISEN. EFF.= .731 POLY. EFF.= .759 DELTA T ON T = .345

STATION 13 FLOW FIELD DESCRIPTION

STREAM -LINE	RADIUS	VELOCITIES MERID	VELOCITIES TANGEN	VELOCITIES TOTAL	TEMPERATURES TOTAL	TEMPERATURES STATIC	PRESSURES TOTAL	PRESSURES STATIC	MACH NO	ANGLES WHIRL	ANGLES SLOPE	RADIUS OF CURVATURE	SPECIFIC WEIGHT
1	7.7230	808.45	256.22	848.08	663.330	604.231	31.641	22.780	.7021	17.58	-2.23	-5.196	.1011
2	7.7571	795.25	251.45	834.05	664.289	607.135	31.616	23.031	.6889	17.55	-2.32	-5.776	.1017
3	7.7920	782.55	247.27	820.70	665.231	609.899	31.589	23.264	.6763	17.54	-2.40	-6.506	.1023
4	7.8278	770.48	243.52	808.05	666.144	612.509	31.554	23.477	.6645	17.54	-2.44	-7.433	.1028
5	7.8645	759.03	239.94	796.11	667.029	614.971	31.511	23.667	.6534	17.54	-2.44	-8.612	.1032
6	7.9023	747.82	235.95	784.15	667.894	617.391	31.438	23.832	.6423	17.51	-2.40	-10.123	.1035
7	7.9413	737.73	231.93	773.33	669.069	619.595	31.354	23.969	.6321	17.45	-2.30	-12.056	.1037
8	7.9814	728.80	228.27	763.71	670.764	622.372	31.259	24.077	.6228	17.39	-2.15	-14.523	.1036
9	8.0229	721.70	225.78	756.19	672.458	625.509	31.180	24.161	.6154	17.37	-1.94	-17.656	.1036
10	8.0655	716.23	224.43	750.57	675.384	629.139	31.104	24.224	.6091	17.40	-1.69	-21.545	.1032
11	8.1095	711.42	223.50	745.70	681.155	635.522	30.992	24.270	.6021	17.44	-1.41	-25.107	.1024
12	8.1548	708.15	222.86	742.39	687.105	641.892	30.837	24.302	.5965	17.47	-1.12	-30.853	.1015
13	8.2012	711.35	224.05	745.89	693.228	647.519	30.928	24.325	.5956	17.49	-.81	-34.865	.1007
14	8.2484	717.30	226.20	752.12	699.514	653.140	31.003	24.341	.5992	17.50	-.52	-37.371	.0999
15	8.2962	723.84	228.88	759.15	705.990	658.762	31.094	24.350	.6022	17.55	-.23	-39.325	.0991
16	8.3440	747.55	237.67	784.43	717.297	665.303	31.504	24.355	.6185	17.64	.05	-39.145	.0979
17	8.3914	774.24	245.80	813.05	729.836	675.731	31.980	24.356	.6371	17.80	.32	-41.904	.0966
18	8.4384	794.30	259.02	835.45	739.199	682.103	32.359	24.349	.6515	18.06	.58	-49.492	.0957
19	8.4853	808.73	269.00	852.35	745.385	686.363	32.625	24.327	.6624	18.40	.77	-73.912	.0949
20	8.5323	825.02	280.73	871.47	754.539	692.471	32.902	24.280	.6746	18.79	.89	-356.079	.0940
21	8.5795	844.23	294.50	894.15	764.642	699.337	33.199	24.198	.6888	19.23	.88	75.314	.0928

BLADE DATA

LOCAT -ION	BLADE-ANGLES SECTION	BLADE-ANGLES LEAN	REL FLOW ANGLE	DEVIATION INCIDENCE	LOSS COEFF	BLADE SPEED	RELATIVE MACH NO	RELATIVE VELOCITY	RELATIVE PRESSURE	RELATIVE TEMPERATURE	PRESSURE RATIO	DELTA T ON T	ISENTROPIC EFFICIENCY	POLYTROPIC EFFICIENCY
1	15.234	-9.414	17.565	1.351	.1043	0.0	.7021	848.08	31.641	663.330	2.153	.279	.8743	.8878
2	15.181	-8.920	17.547	1.365	.1015	0.0	.6883	834.05	31.616	664.289	2.151	.281	.8576	.8809
3	15.153	-8.357	17.535	1.383	.0997	0.0	.6763	820.70	31.589	665.231	2.149	.283	.8608	.8749
4	15.134	-7.717	17.540	1.406	.0987	0.0	.6645	808.05	31.554	666.144	2.147	.284	.8542	.8688
5	15.106	-6.984	17.541	1.436	.0988	0.0	.6534	796.11	31.511	667.029	2.144	.286	.8474	.8627
6	15.041	-6.144	17.512	1.470	.1013	0.0	.6423	784.16	31.438	667.894	2.139	.288	.8396	.8556
7	15.944	-5.212	17.452	1.503	.1033	0.0	.6321	773.33	31.354	669.369	2.134	.290	.8298	.8467
8	15.846	-4.225	17.391	1.545	.1064	0.0	.6228	763.71	31.259	670.764	2.127	.293	.8168	.8350
9	15.793	-3.235	17.372	1.579	.1075	0.0	.6154	755.19	31.180	672.458	2.122	.296	.8048	.8241
10	15.789	-2.290	17.398	1.609	.1073	0.0	.6091	750.57	31.104	675.384	2.116	.302	.7869	.8079
11	15.806	-1.440	17.441	1.635	.1047	0.0	.6021	745.70	30.992	681.155	2.109	.313	.7547	.7788
12	15.813	-.734	17.469	1.656	.1004	0.0	.5965	742.39	30.897	687.105	2.102	.325	.7246	.7515
13	15.814	-.124	17.483	1.669	.0955	0.0	.5966	745.88	30.928	693.228	2.105	.337	.7002	.7294
14	15.828	.523	17.502	1.674	.0931	0.0	.5992	752.12	31.008	699.514	2.110	.349	.6783	.7097
15	15.875	1.330	17.546	1.670	.0965	0.0	.6022	753.16	31.094	705.990	2.116	.361	.6575	.6918
16	15.976	2.281	17.637	1.662	.1031	0.0	.6185	784.43	31.504	717.297	2.144	.383	.6319	.6684
17	16.150	3.322	17.804	1.653	.1130	0.0	.6370	813.08	31.980	729.336	2.176	.407	.6072	.6460
18	16.410	4.438	18.061	1.650	.1230	0.0	.6515	835.46	32.358	739.199	2.202	.425	.5911	.6328
19	16.742	5.665	18.397	1.655	.1334	0.0	.6574	852.35	32.625	745.386	2.220	.439	.5709	.6222
20	17.117	7.040	18.792	1.675	.1523	0.0	.6745	871.47	32.902	754.539	2.239	.455	.5654	.6105
21	17.510	8.542	19.229	1.719	.1743	0.0	.6885	894.18	33.199	764.542	2.259	.474	.5488	.5968

STATION 13 INTEGRATED PERFORMANCE PRESSURE RATIO = 2.159 ISEN. EFF.= .704 POLY. EFF.= .734 DELTA T ON T = .345

STATION 14 FLOW FIELD DESCRIPTION

STREAM -LINE	RADIUS	------VELOCITIES------ MERID	TANGEN	TOTAL	--TEMPERATURES-- TOTAL	STATIC	---PRESSURES--- TOTAL	STATIC	MACH NO	---ANGLES--- WHIRL	SLOPE	RADIUS OF CURVATURE	SPECIFIC WEIGHT
1	7.6720	669.09	72.48	673.01	663.330	526.133	30.903	25.217	.5474	5.18	-4.29	15.241	.1080
2	7.7100	668.13	71.09	671.90	664.289	527.217	30.857	25.213	.5461	6.07	-4.08	17.337	.1078
3	7.7489	667.07	69.75	670.70	665.231	528.293	30.829	25.208	.5445	5.97	-3.87	18.564	.1076
4	7.7836	665.83	68.56	669.35	666.144	529.397	30.760	25.202	.5431	5.88	-3.64	19.943	.1074
5	7.8231	664.25	67.51	667.63	667.029	530.427	30.740	25.196	.5413	5.80	-3.40	21.510	.1072
6	7.8706	660.58	66.36	663.90	667.894	531.705	30.652	25.189	.5377	5.74	-3.15	23.325	.1069
7	7.9131	656.64	65.23	659.39	669.069	533.321	30.558	25.181	.5338	5.68	-2.87	25.501	.1066
8	7.9568	652.44	64.25	655.60	670.764	535.483	30.454	25.173	.5294	5.62	-2.57	28.234	.1062
9	8.0016	649.47	63.45	652.55	672.458	537.505	30.374	25.165	.5251	5.58	-2.25	31.756	.1058
10	8.0476	647.99	62.91	651.04	675.384	540.500	30.312	25.156	.5236	5.54	-1.93	36.507	.1053
11	8.0956	646.80	62.43	649.81	681.155	546.513	30.232	25.148	.5203	5.52	-1.61	43.402	.1043
12	8.1429	647.18	62.31	650.17	687.105	552.438	30.179	25.141	.5182	5.50	-1.30	54.639	.1033
13	8.1921	654.63	62.83	657.65	693.228	557.771	30.251	25.134	.5221	5.49	-1.01	75.073	.1024
14	8.2417	663.55	63.70	665.61	699.514	563.095	30.348	25.128	.5271	5.48	-.78	125.237	.1016
15	8.2917	672.80	64.67	675.90	705.990	668.563	30.453	25.123	.5323	5.49	-.53	330.727	.1008
16	8.3417	694.35	67.05	697.59	717.297	577.455	30.742	25.120	.5458	5.52	-.30	-1057.621	.0994
17	8.3914	717.77	69.97	721.18	729.336	537.285	31.065	25.120	.5503	5.57	-.04	-315.655	.0980
18	8.4409	736.27	72.95	739.88	739.199	694.439	31.336	25.122	.5719	5.66	.24	-247.722	.0970
19	8.4903	748.22	76.10	752.08	746.386	700.159	31.507	25.125	.5790	5.81	.52	-243.458	.0962
20	8.5400	760.49	80.31	764.72	754.539	706.769	31.679	25.128	.5960	6.03	.80	-311.276	.0953
21	8.5900	773.93	85.30	778.64	764.542	715.151	31.859	25.132	.5932	6.33	1.06	-510.507	.0942

BLADE DATA

LOCAT -ION	BLADE-ANGLES SECTION	LEAN	REL FLOW ANGLE	DEVIATION INCIDENCE	LOSS COEF	BLADE SPEED	RELATIVE MACH NO	RELATIVE VELOCITY	RELATIVE PRESSURE	RELATIVE TEMPERATURE	PRESSURE RATIO	DELTA T ON T	ISENTROPIC EFFICIENCY	POLYTROPIC EFFICIENCY
1	3.965	-1.054	6.182	2.215	.1357	0.0	.5474	673.01	30.903	663.330	2.103	.279	.8445	.8597
2	3.833	-.995	6.073	2.241	.1528	0.0	.5461	671.90	30.857	664.289	2.100	.281	.8374	.8534
3	3.700	-.921	5.970	2.270	.1505	0.0	.5445	670.70	30.829	665.231	2.098	.283	.8305	.8471
4	3.572	-.837	5.879	2.307	.1493	0.0	.5431	669.35	30.760	666.144	2.095	.284	.8237	.8409
5	3.450	-.748	5.803	2.353	.1501	0.0	.5413	667.63	30.740	667.029	2.092	.285	.8169	.8347
6	3.330	-.661	5.737	2.407	.1534	0.0	.5377	663.90	30.652	667.394	2.085	.288	.8086	.8272
7	3.212	-.583	5.677	2.465	.1570	0.0	.5335	659.55	30.553	669.069	2.079	.290	.7985	.8180
8	3.098	-.515	5.624	2.525	.1602	0.0	.5294	655.60	30.454	670.764	2.072	.293	.7856	.8062
9	2.994	-.457	5.580	2.585	.1520	0.0	.5251	652.56	30.374	672.458	2.067	.295	.7738	.7954
10	2.904	-.405	5.545	2.641	.1510	0.0	.5235	651.04	30.312	675.384	2.063	.302	.7560	.7801
11	2.831	-.349	5.518	2.687	.1573	0.0	.5203	649.81	30.232	681.155	2.057	.313	.7270	.7528
12	2.779	-.273	5.500	2.721	.1505	0.0	.5182	650.17	30.179	687.105	2.054	.325	.6993	.7277
13	2.750	-.187	5.488	2.733	.1431	0.0	.5221	657.65	30.251	693.228	2.058	.337	.6771	.7077
14	2.747	-.138	5.483	2.736	.1395	0.0	.5271	665.61	30.348	699.514	2.065	.349	.6567	.6893
15	2.774	-.171	5.490	2.716	.1357	0.0	.5323	675.90	30.453	705.990	2.072	.361	.6372	.6717
16	2.827	-.286	5.516	2.689	.1549	0.0	.5459	697.59	30.742	717.297	2.092	.383	.6094	.6469
17	2.900	-.461	5.568	2.667	.1775	0.0	.5603	721.18	31.065	729.336	2.114	.407	.5821	.6226
18	2.996	-.667	5.659	2.603	.1933	0.0	.5719	739.88	31.336	739.199	2.132	.425	.5644	.6070
19	3.126	-.854	5.807	2.681	.2095	0.0	.5790	752.08	31.507	746.386	2.144	.439	.5508	.5950
20	3.300	-.981	6.028	2.728	.2309	0.0	.5860	764.72	31.679	754.539	2.156	.455	.5350	.5818
21	3.508	-1.055	6.326	2.818	.2610	0.0	.5932	778.64	31.859	764.542	2.168	.474	.5179	.5658

STATION 14 INTEGRATED PERFORMANCE PRESSURE RATIO = 2.093 ISEN. EFF.= .677 POLY. EFF.= .708 DELTA T ON T = .345

STATION 15 FLOW FIELD DESCRIPTION

STREAM -LINE	RADIUS	VELOCITIES MERID	VELOCITIES TANGEN	VELOCITIES TOTAL	TEMPERATURES TOTAL	TEMPERATURES STATIC	PRESSURES TOTAL	PRESSURES STATIC	MACH NO	ANGLES WHIRL	ANGLES SLOPE	RADIUS OF CURVATURE	SPECIFIC WEIGHT
1	7.6400	613.08	0.00	613.08	553.330	532.467	30.157	25.504	.4962	0.00	-1.65	10.524	.1081
2	7.6800	613.03	0.00	613.03	554.269	533.434	30.119	25.471	.4958	0.00	-1.62	11.117	.1078
3	7.7208	612.82	0.00	612.82	555.231	534.395	30.071	25.439	.4953	0.00	-1.58	11.695	.1075
4	7.7626	612.45	0.00	612.45	556.144	635.349	30.021	25.409	.4945	0.00	-1.53	12.381	.1072
5	7.8052	611.70	0.00	611.70	557.029	636.312	29.957	25.379	.4935	0.00	-1.46	13.207	.1069
6	7.8488	607.78	0.00	607.78	567.894	537.570	29.852	25.351	.4900	0.00	-1.38	14.252	.1066
7	7.8937	603.63	0.00	603.63	559.069	539.161	29.755	25.325	.4860	0.00	-1.29	15.648	.1062
8	7.9397	599.27	0.00	599.27	570.764	641.290	29.644	25.301	.4817	0.00	-1.17	17.568	.1058
9	7.9869	596.67	0.00	596.67	572.458	543.241	29.565	25.280	.4789	0.00	-1.05	20.274	.1054
10	8.0352	596.47	0.00	596.47	575.384	546.191	29.521	25.262	.4777	0.00	-.91	24.125	.1048
11	8.0844	597.22	0.00	597.22	581.155	551.539	29.475	25.246	.4762	0.00	-.77	29.673	.1038
12	8.1347	600.13	0.00	600.13	587.105	557.573	29.455	25.234	.4765	0.00	-.64	37.771	.1029
13	8.1855	610.53	0.00	610.53	593.228	562.674	29.574	25.224	.4829	0.00	-.52	49.342	.1021
14	8.2365	620.79	0.00	620.79	599.514	567.935	29.634	25.215	.4891	0.00	-.42	65.401	.1012
15	8.2877	631.31	0.00	631.31	705.990	573.544	29.800	25.213	.4954	0.00	-.32	93.397	.1004
16	8.3391	646.43	0.00	646.43	717.297	583.091	29.959	25.206	.5037	0.00	-.22	169.453	.0989
17	8.3907	661.87	0.00	661.87	729.836	594.005	30.119	25.209	.5113	0.00	-.09	-3579.529	.0974
18	8.4424	675.41	0.00	675.41	739.199	731.909	30.270	25.207	.5193	0.00	.06	-135.989	.0963
19	8.4945	683.05	0.00	683.05	746.385	705.265	30.350	25.212	.5229	0.00	.21	-69.072	.0954
20	8.5470	690.89	0.00	690.89	754.539	715.560	30.437	25.222	.5262	0.00	.36	-43.252	.0945
21	8.6000	699.35	0.00	699.35	754.642	724.731	30.519	25.236	.5294	0.00	.52	-33.905	.0934

BLADE DATA

LOCAT -ION	BLADE-ANGLES SECTION	BLADE-ANGLES LEAN	REL FLOW ANGLE	DEVIATION INCIDENCE	LOSS COEFF	BLADE SPEED	RELATIVE MACH NO	RELATIVE VELOCITY	RELATIVE PRESSURE	RELATIVE TEMPERATURE	PRESSURE RATIO	DELTA T ON T	ISENTROPIC EFFICIENCY	POLYTROPIC EFFICIENCY
1	-7.239	.020	0.000	7.239	.2063	0.0	.4962	613.08	30.157	653.330	2.053	.279	.8142	.8318
2	-7.397	.020	0.000	7.397	.2033	0.0	.4958	613.03	30.119	554.289	2.049	.281	.8069	.8252
3	-7.564	.019	0.000	7.564	.2019	0.0	.4953	612.82	30.071	655.231	2.046	.283	.7997	.8186
4	-7.735	.017	0.000	7.735	.2011	0.0	.4945	612.45	30.021	556.144	2.043	.284	.7927	.8122
5	-7.905	.015	0.000	7.905	.2015	0.0	.4935	611.70	29.967	657.329	2.039	.286	.7857	.8059
6	-8.074	.013	0.000	8.074	.2059	0.0	.4900	607.78	29.852	557.394	2.032	.288	.7769	.7978
7	-8.242	.011	0.000	8.242	.2104	0.0	.4860	603.63	29.755	559.069	2.025	.290	.7665	.7882
8	-8.405	.010	0.000	8.405	.2144	0.0	.4817	599.27	29.644	570.764	2.017	.293	.7535	.7763
9	-8.559	.008	0.000	8.559	.2164	0.0	.4789	596.67	29.565	572.458	2.012	.296	.7421	.7659
10	-8.699	.006	0.000	8.699	.2147	0.0	.4777	596.47	29.521	675.384	2.009	.302	.7264	.7516
11	-8.821	.005	0.000	8.821	.2091	0.0	.4762	597.22	29.475	581.155	2.006	.313	.6988	.7264
12	-8.923	.003	0.000	8.923	.2005	0.0	.4765	600.13	29.455	637.105	2.005	.325	.6737	.7035
13	-9.002	.000	0.000	9.002	.1907	0.0	.4829	610.53	29.574	593.228	2.012	.337	.6537	.6855
14	-9.049	-.002	0.000	9.049	.1863	0.0	.4891	620.79	29.634	599.514	2.020	.349	.6346	.6682
15	-9.063	-.005	0.000	9.063	.1913	0.0	.4954	631.31	29.800	705.390	2.028	.361	.6163	.6510
16	-9.058	-.008	0.000	9.058	.2081	0.0	.5037	646.43	29.959	717.297	2.039	.383	.5859	.6243
17	-9.062	-.013	0.000	9.062	.2339	0.0	.5113	661.87	30.119	729.336	2.049	.407	.5554	.5959
18	-9.089	-.018	0.000	9.089	.2613	0.0	.5193	675.41	30.270	739.199	2.060	.425	.5360	.5794
19	-9.129	-.025	0.000	9.129	.2827	0.0	.5229	683.06	30.350	746.386	2.065	.439	.5211	.5660
20	-9.171	-.032	0.000	9.171	.3101	0.0	.5262	690.89	30.437	754.539	2.071	.455	.5050	.5515
21	-9.213	-.038	0.000	9.213	.3471	0.0	.5294	699.35	30.519	754.542	2.077	.474	.4861	.5344

STATION 15 INTEGRATED PERFORMANCE PRESSURE RATIO = 2.035 ISEN. EFF.= .649 POLY. EFF.= .661 DELTA T ON T = .345

STATION 16 FLOW FIELD DESCRIPTION

STREAM -LINE	RADIUS	VELOCITIES MERID	VELOCITIES TANGEN	VELOCITIES TOTAL	TEMPERATURES TOTAL	TEMPERATURES STATIC	PRESSURES TOTAL	PRESSURES STATIC	MACH NO	ANGLES WHIRL	ANGLES SLOPE	RADIUS OF CURVATURE	SPECIFIC WEIGHT
1	7.6400	630.42	0.00	630.42	563.330	530.595	30.167	25.254	.5110	0.00	0.00	0.000	.1074
2	7.6793	628.15	0.00	628.15	564.289	531.390	30.119	25.253	.5087	0.00	-.03	1140.289	.1072
3	7.7195	625.83	0.00	625.83	565.231	533.074	30.071	25.253	.5063	0.00	-.06	512.523	.1070
4	7.7608	623.41	0.00	623.41	566.144	534.237	30.021	25.252	.5039	0.00	-.08	441.479	.1068
5	7.8030	620.63	0.00	620.63	567.029	535.402	29.957	25.251	.5012	0.00	-.09	360.471	.1066
6	7.8464	614.95	0.00	614.95	567.894	536.849	29.862	25.250	.4961	0.00	-.11	315.978	.1063
7	7.8910	609.10	0.00	609.10	569.069	538.515	29.755	25.249	.4907	0.00	-.12	290.621	.1060
8	7.9369	603.18	0.00	603.13	570.764	540.304	29.644	25.248	.4850	0.00	-.12	277.545	.1056
9	7.9840	599.17	0.00	599.17	572.455	542.395	29.555	25.246	.4810	0.00	-.13	273.784	.1053
10	8.0323	597.73	0.00	597.73	575.384	546.068	29.521	25.245	.4787	0.00	-.13	279.213	.1048
11	8.0817	597.44	0.00	597.44	581.155	551.575	29.475	25.243	.4754	0.00	-.12	290.739	.1038
12	8.1321	599.62	0.00	599.62	587.105	557.533	29.465	25.242	.4760	0.00	-.11	312.546	.1029
13	8.1832	609.27	0.00	609.27	593.228	562.800	29.574	25.241	.4819	0.00	-.10	345.435	.1021
14	8.2345	619.05	0.00	619.05	599.514	568.111	29.684	25.240	.4877	0.00	-.09	392.940	.1013
15	8.2860	629.24	0.00	629.24	705.990	573.553	29.800	25.239	.4937	0.00	-.08	462.133	.1005
16	8.3377	644.15	0.00	644.15	717.297	583.331	29.959	25.238	.5019	0.00	-.05	566.550	.0990
17	8.3896	659.55	0.00	659.55	729.836	594.254	30.118	25.237	.5099	0.00	-.05	734.351	.0975
18	8.4417	673.30	0.00	673.30	739.199	702.142	30.276	25.237	.5176	0.00	-.04	1032.491	.0964
19	8.4940	681.38	0.00	681.33	746.386	708.452	30.355	25.236	.5215	0.00	-.02	1567.824	.0955
20	8.5468	689.91	0.00	689.91	754.539	715.671	30.437	25.236	.5255	0.00	-.01	3597.584	.0945
21	8.6000	699.35	0.00	699.35	764.642	724.731	30.519	25.236	.5294	0.00	0.00	0.000	.0934

STATION 17 FLOW FIELD DESCRIPTION

STREAM -LINE	RADIUS	VELOCITIES MERID	VELOCITIES TANGEN	VELOCITIES TOTAL	TEMPERATURES TOTAL	TEMPERATURES STATIC	PRESSURES TOTAL	PRESSURES STATIC	MACH NO	ANGLES WHIRL	ANGLES SLOPE	RADIUS OF CURVATURE	SPECIFIC WEIGHT
1	7.6400	631.64	0.00	631.64	563.330	530.569	30.167	25.236	.5120	0.00	0.00	0.000	.1073
2	7.6792	629.38	0.00	629.38	564.289	531.764	30.119	25.236	.5097	0.00	-.00	0.000	.1071
3	7.7195	627.02	0.00	627.02	565.231	532.951	30.071	25.236	.5073	0.00	-.00	0.000	.1069
4	7.7607	624.55	0.00	624.55	566.144	534.119	30.021	25.236	.5049	0.00	-.00	0.000	.1067
5	7.8029	621.78	0.00	621.78	567.029	535.290	29.967	25.236	.5022	0.00	-.00	0.000	.1065
6	7.8462	615.98	0.00	615.98	567.894	536.745	29.862	25.236	.4969	0.00	-.01	0.000	.1063
7	7.8908	610.05	0.00	610.05	569.069	538.521	29.755	25.236	.4915	0.00	-.01	0.000	.1060
8	7.9367	604.04	0.00	604.04	570.764	540.818	29.644	25.236	.4858	0.00	-.01	0.000	.1056
9	7.9838	599.93	0.00	599.93	572.458	542.321	29.556	25.236	.4817	0.00	-.01	0.000	.1052
10	8.0321	598.40	0.00	598.40	575.384	546.002	29.521	25.236	.4793	0.00	-.01	0.000	.1047
11	8.0815	598.02	0.00	598.02	581.155	551.523	29.475	25.236	.4769	0.00	-.01	0.000	.1038
12	8.1319	599.93	0.00	599.93	587.105	557.587	29.465	25.236	.4764	0.00	-.01	0.000	.1029
13	8.1830	609.65	0.00	609.65	593.228	562.762	29.574	25.236	.4822	0.00	-.01	0.000	.1021
14	8.2343	619.34	0.00	619.34	599.514	568.082	29.684	25.236	.4879	0.00	-.01	0.000	.1013
15	8.2858	629.45	0.00	629.45	705.990	573.535	29.800	25.236	.4939	0.00	-.01	0.000	.1005
16	8.3375	644.30	0.00	644.30	717.297	583.315	29.959	25.236	.5020	0.00	-.01	0.000	.0990
17	8.3895	659.65	0.00	659.65	729.835	594.244	30.118	25.236	.5100	0.00	-.00	0.000	.0975
18	8.4416	673.34	0.00	673.34	739.199	702.137	30.276	25.236	.5177	0.00	-.00	0.000	.0964
19	8.4939	681.40	0.00	681.40	746.385	708.450	30.356	25.236	.5216	0.00	-.00	0.000	.0955
20	8.5467	689.92	0.00	689.92	754.539	715.570	30.437	25.236	.5255	0.00	-.00	0.000	.0945
21	8.6000	699.35	0.00	699.35	764.642	724.731	30.519	25.236	.5294	0.00	0.00	0.000	.0934

ROTOR PERFORMANCE

LOCAT -ION	INLET RADIUS	OUTLET RADIUS	INLET M. NO	INCID -ENCE	DEVIA -TION	LOSS COEFF	2-D D FACTOR	3-D D FACTOR	DELTA P ON Q	REL V RATIO	DELTA H/U**2	SECTION-ANGLES INLET	SECTION-ANGLES OUTLET	LEAN-ANGLES INLET	LEAN-ANGLES OUTLET
1	6.7500	7.5499	1.0187	10.124	22.590	.1187	.3579	.3756	.5246	.7531	.6021	-62.567	-11.816	17.205	2.399
2	6.8657	7.5867	1.0356	10.330	22.211	.1283	.3865	.3938	.5124	.7371	.6002	-62.595	-12.739	16.458	2.597
3	6.9807	7.6246	1.0525	10.451	21.516	.1369	.4034	.4099	.4991	.7233	.5982	-62.594	-13.679	15.449	2.830
4	7.0948	7.6634	1.0692	10.499	21.392	.1445	.4183	.4239	.4850	.7103	.5958	-62.658	-14.622	14.169	3.088
5	7.2081	7.7032	1.0859	10.547	20.923	.1512	.4312	.4360	.4704	.7003	.5932	-62.719	-15.551	12.785	3.362
6	7.3207	7.7438	1.1024	10.623	20.458	.1571	.4423	.4464	.4555	.6912	.5904	-62.753	-16.451	11.456	3.638
7	7.4325	7.7854	1.1187	10.651	19.996	.1563	.4542	.4575	.4403	.6815	.5888	-62.907	-17.305	10.305	3.901
8	7.5437	7.8280	1.1349	10.697	19.557	.1305	.4585	.4712	.4250	.6693	.5890	-62.911	-18.100	9.381	4.137
9	7.6545	7.8718	1.1510	10.698	19.156	.1339	.4812	.4833	.4095	.6593	.5890	-63.039	-18.832	8.548	4.340
10	7.7649	7.9169	1.1669	10.715	18.764	.2180	.5008	.5022	.3941	.6433	.5934	-63.161	-19.509	7.683	4.512
11	7.8750	7.9543	1.1826	10.745	18.422	.2560	.5381	.5390	.3789	.6113	.6050	-63.293	-20.148	6.846	4.656
12	7.9851	8.0150	1.1983	10.778	18.264	.3111	.5757	.5760	.3644	.5791	.6224	-63.412	-20.756	6.151	4.776
13	8.0953	8.0694	1.2138	10.820	17.967	.3479	.6095	.6092	.3506	.5505	.6365	-63.543	-21.372	5.623	4.870
14	8.2057	8.1275	1.2293	10.881	17.545	.3788	.6404	.6395	.3376	.5245	.6501	-63.665	-21.957	5.229	4.936
15	8.3164	8.1896	1.2445	10.968	17.420	.4051	.6717	.6704	.3257	.4973	.6633	-63.771	-22.545	4.908	4.961
16	8.4276	8.2560	1.2601	11.082	15.705	.4412	.7137	.7119	.3149	.4645	.6923	-63.867	-23.094	4.562	4.926
17	8.5395	8.3273	1.2755	11.215	13.385	.4733	.7503	.7580	.3055	.4259	.7237	-63.960	-23.603	4.119	4.889
18	8.6524	8.4041	1.2907	11.355	13.176	.4939	.7927	.7900	.2977	.4004	.7423	-64.069	-24.051	3.587	4.592
19	8.7665	8.4857	1.3059	11.497	13.177	.5052	.8149	.8118	.2912	.3817	.7519	-64.207	-24.449	2.991	4.297
20	8.8822	8.5730	1.3210	11.670	13.545	.5205	.8427	.8393	.2861	.3573	.7633	-64.353	-24.752	2.386	3.958
21	9.0000	8.6699	1.3360	11.919	15.137	.5395	.8835	.8795	.2835	.3223	.7785	-64.476	-24.964	1.835	3.617

STATOR PERFORMANCE

LOCAT -ION	INLET RADIUS	OUTLET RADIUS	INLET M. NO	INCID -ENCE	DEVIA -TION	LOSS COEFF	2-D D FACTOR	3-D D FACTOR	DELTA P ON Q	REL V RATIO	DELTA H/U**2	SECTION-ANGLES INLET	SECTION-ANGLES OUTLET	LEAN-ANGLES INLET	LEAN-ANGLES OUTLET
1	7.6199	7.6400	.9392	-7.742	7.239	.2069	.5777	.5770	.4685	.5593	0.0000	48.817	-7.239	-39.941	.020
2	7.6667	7.6800	.9527	-7.506	7.397	.2039	.5891	.5889	.4784	.5513	0.0000	47.972	-7.397	-37.355	.020
3	7.7129	7.7200	.9632	-7.105	7.564	.2019	.5992	.5991	.4859	.5461	0.0000	47.110	-7.554	-34.527	.019
4	7.7579	7.7626	.9703	-6.754	7.735	.2011	.6079	.6078	.4907	.5421	0.0000	46.449	-7.735	-31.532	.017
5	7.8017	7.8052	.9744	-6.426	7.905	.2015	.6153	.6153	.4933	.5391	0.0000	45.941	-7.905	-28.430	.016
6	7.8446	7.8488	.9761	-6.121	8.074	.2059	.6242	.6242	.4943	.5345	0.0000	45.553	-8.074	-25.271	.013
7	7.8871	7.8937	.9757	-5.700	8.242	.2104	.6327	.6326	.4947	.5305	0.0000	45.223	-8.242	-22.114	.011
8	7.9293	7.9397	.9736	-5.122	8.405	.2144	.6412	.6411	.4951	.5271	0.0000	44.952	-8.405	-18.998	.010
9	7.9715	7.9869	.9707	-4.569	8.559	.2154	.6474	.6473	.4951	.5254	0.0000	44.737	-8.559	-15.828	.008
10	8.0142	8.0352	.9665	-3.682	8.699	.2147	.6524	.6522	.4961	.5253	0.0000	44.585	-8.699	-12.419	.006
11	8.0575	8.0844	.9603	-1.955	8.821	.2091	.6594	.6591	.4997	.5274	0.0000	44.505	-8.821	-8.596	.005
12	8.1022	8.1347	.9536	-.230	8.923	.2005	.6539	.6635	.5037	.5303	0.0000	44.524	-8.923	-4.521	.003
13	8.1483	8.1855	.9501	1.270	9.002	.1907	.6521	.6617	.5032	.5393	0.0000	44.686	-9.002	-.583	.000
14	8.1957	8.2365	.9486	2.564	9.049	.1863	.6503	.6598	.4991	.5465	0.0000	44.990	-9.049	2.991	-.002
15	8.2445	8.2877	.9464	3.966	9.053	.1819	.6572	.6567	.4945	.5544	0.0000	45.342	-9.053	6.952	-.005
16	8.2951	8.3391	.9588	6.023	9.058	.2031	.6599	.6593	.4590	.5573	0.0000	45.631	-9.058	12.358	-.008
17	8.3480	8.3907	.9713	8.411	9.052	.2395	.6522	.6517	.4399	.5592	0.0000	45.949	-9.052	19.484	-.013
18	8.4043	8.4424	.9745	10.113	9.089	.2610	.6571	.6565	.4150	.5655	0.0000	46.572	-9.089	27.404	-.018
19	8.4651	8.4945	.9687	11.320	9.129	.2927	.6490	.6485	.3901	.5723	0.0000	47.569	-9.129	35.005	-.025
20	8.5342	8.5470	.9569	13.217	9.171	.3101	.6367	.6365	.3575	.5815	0.0000	49.949	-9.171	41.649	-.032
21	8.6199	8.6000	.9334	16.484	9.213	.3471	.6199	.6202	.3134	.5943	0.0000	50.914	-9.213	46.652	-.038

WAKE AND BOUNDARY LAYER BLOCKAGES (PERCENT)

STATION	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17
MID BLOCKAGE	0.0	0.0	0.0	1.0	1.0	1.5	2.7	2.3	1.9	5.5	7.0	3.5	10.0	11.0	11.7	12.9	13.0
DIST FACTOR	1.0	1.0	1.0	1.0	1.0	.5	.3	.2	0.0	.5	1.0	1.0	1.0	1.0	1.0	1.0	1.0
INT BLOCKAGE	0.0	0.0	0.0	1.0	1.0	1.5	2.0	2.3	1.9	5.5	7.0	3.5	10.0	11.0	11.7	12.9	13.0

SUMMARY POINT NO. 1 THE CALCULATION IS CONVERGED PASS 20

TEST POINT TITLE = 206300215890

FLOW = 19.04 SPEED = 18334.7 PRESSURE RATIO = 2.035 ISENTROPIC EFFY = .5483 POLYTROPIC EFFY = .6815 DEL T/T = .3451

7. PHASE II WITHIN-BLADE ANALYSIS
(100% SPEED)
TEST POINT 208300915800

STATION 1 FLOW FIELD DESCRIPTION

STREAM LINE	RADIUS	VELOCITIES MERID	VELOCITIES TANGEN	VELOCITIES TOTAL	TEMPERATURES TOTAL	TEMPERATURES STATIC	PRESSURES TOTAL	PRESSURES STATIC	MACH NO	ANGLES WHIRL	ANGLES SLOPE	RADIUS OF CURVATURE	SPECIFIC WEIGHT
1	6.0640	287.97	0.00	287.97	518.688	511.843	14.696	14.027	.2589	0.00	20.93	0.000	.0735
2	6.2257	287.97	0.00	287.97	518.688	511.843	14.696	14.027	.2589	0.00	19.77	0.000	.0735
3	6.3835	287.97	0.00	287.97	518.688	511.843	14.696	14.027	.2589	0.00	18.59	0.000	.0735
4	6.5391	287.97	0.00	287.97	518.688	511.843	14.696	14.027	.2589	0.00	17.41	0.000	.0735
5	6.6937	287.97	0.00	287.97	518.688	511.843	14.696	14.027	.2589	0.00	16.22	0.000	.0735
6	6.8472	287.97	0.00	287.97	518.688	511.843	14.696	14.027	.2589	0.00	15.03	0.000	.0735
7	6.9994	287.97	0.00	287.97	518.688	511.843	14.696	14.027	.2589	0.00	13.84	0.000	.0735
8	7.1517	287.97	0.00	287.97	518.688	511.843	14.696	14.027	.2589	0.00	12.65	0.000	.0735
9	7.3024	287.97	0.00	287.97	518.688	511.843	14.696	14.027	.2589	0.00	11.47	0.000	.0735
10	7.4534	287.97	0.00	287.97	518.688	511.843	14.696	14.027	.2589	0.00	10.30	0.000	.0735
11	7.6034	287.97	0.00	287.97	518.688	511.843	14.696	14.027	.2589	0.00	9.14	0.000	.0735
12	7.7530	287.97	0.00	287.97	518.688	511.843	14.696	14.027	.2589	0.00	8.00	0.000	.0735
13	7.9022	287.97	0.00	287.97	518.688	511.843	14.696	14.027	.2589	0.00	6.88	0.000	.0735
14	8.0511	287.97	0.00	287.97	518.688	511.843	14.696	14.027	.2589	0.00	5.80	0.000	.0735
15	8.1994	287.97	0.00	287.97	518.688	511.843	14.696	14.027	.2589	0.00	4.76	0.000	.0735
16	8.3483	287.97	0.00	287.97	518.688	511.843	14.696	14.027	.2589	0.00	3.77	0.000	.0735
17	8.4967	287.97	0.00	287.97	518.688	511.843	14.696	14.027	.2589	0.00	2.84	0.000	.0735
18	8.6450	287.97	0.00	287.97	518.688	511.843	14.696	14.027	.2589	0.00	1.98	0.000	.0735
19	8.7933	287.97	0.00	287.97	518.688	511.843	14.696	14.027	.2589	0.00	1.21	0.000	.0735
20	8.9417	287.97	0.00	287.97	518.688	511.843	14.696	14.027	.2589	0.00	.55	0.000	.0735
21	9.0900	287.97	0.00	287.97	518.688	511.843	14.696	14.027	.2589	0.00	0.00	0.000	.0735

STATION 2 FLOW FIELD DESCRIPTION

STREAM LINE	RADIUS	VELOCITIES MERID	VELOCITIES TANGEN	VELOCITIES TOTAL	TEMPERATURES TOTAL	TEMPERATURES STATIC	PRESSURES TOTAL	PRESSURES STATIC	MACH NO	ANGLES WHIRL	ANGLES SLOPE	RADIUS OF CURVATURE	SPECIFIC WEIGHT
1	6.3746	311.77	0.00	311.77	518.688	510.564	14.696	13.914	.2806	0.00	20.83	-205.758	.0731
2	6.5142	313.24	0.00	313.24	518.688	510.589	14.696	13.907	.2819	0.00	19.61	-137.572	.0730
3	6.6526	314.58	0.00	314.58	518.688	510.519	14.696	13.900	.2832	0.00	18.40	-108.961	.0730
4	6.7900	315.80	0.00	315.80	518.688	510.456	14.696	13.894	.2843	0.00	17.18	-92.870	.0730
5	6.9264	316.93	0.00	316.93	518.688	510.398	14.696	13.889	.2853	0.00	15.97	-82.826	.0730
6	7.0620	317.89	0.00	317.89	518.688	510.346	14.696	13.884	.2862	0.00	14.75	-73.672	.0730
7	7.1963	318.74	0.00	318.74	518.688	510.301	14.696	13.880	.2870	0.00	13.53	-66.578	.0729
8	7.3313	319.44	0.00	319.44	518.688	510.265	14.696	13.876	.2876	0.00	12.31	-60.171	.0729
9	7.4651	319.97	0.00	319.97	518.688	510.236	14.696	13.874	.2881	0.00	11.09	-54.198	.0729
10	7.5987	320.32	0.00	320.32	518.688	510.219	14.696	13.872	.2884	0.00	9.88	-48.565	.0729
11	7.7321	320.44	0.00	320.44	518.688	510.212	14.696	13.871	.2885	0.00	8.67	-43.256	.0729
12	7.8654	320.32	0.00	320.32	518.688	510.219	14.696	13.872	.2884	0.00	7.47	-38.283	.0729
13	7.9987	319.93	0.00	319.93	518.688	510.233	14.696	13.874	.2881	0.00	6.28	-33.674	.0729
14	8.1324	319.24	0.00	319.24	518.688	510.275	14.696	13.877	.2874	0.00	5.12	-29.448	.0729
15	8.2664	318.21	0.00	318.21	518.688	510.330	14.696	13.882	.2865	0.00	3.97	-25.620	.0729
16	8.4010	316.80	0.00	316.80	518.688	510.403	14.696	13.889	.2852	0.00	2.86	-22.196	.0730
17	8.5364	314.99	0.00	314.99	518.688	510.498	14.696	13.898	.2835	0.00	1.79	-19.167	.0730
18	8.6727	312.72	0.00	312.72	518.688	510.615	14.696	13.910	.2815	0.00	.77	-16.516	.0730
19	8.8104	309.95	0.00	309.95	518.688	510.758	14.696	13.923	.2789	0.00	-.20	-14.215	.0731
20	8.9493	306.64	0.00	306.64	518.688	510.925	14.696	13.939	.2759	0.00	-1.10	-12.228	.0732
21	9.0900	302.72	0.00	302.72	518.688	511.124	14.696	13.958	.2723	0.00	-1.91	-10.518	.0732

STATION 3 FLOW FIELD DESCRIPTION

STREAM -LINE	RADIUS	VELOCITIES MERID	VELOCITIES TANGEN	VELOCITIES TOTAL	TEMPERATURES TOTAL	TEMPERATURES STATIC	PRESSURES TOTAL	PRESSURES STATIC	MACH NO	ANGLES WHIRL	ANGLES SLOPE	RADIUS OF CURVATURE	SPECIFIC WEIGHT
1	6.6016	338.83	0.00	338.83	518.688	509.211	14.696	13.776	.3054	0.00	20.54	-83.031	.0725
2	6.7262	340.91	0.00	340.91	518.688	509.094	14.696	13.765	.3073	0.00	19.31	-100.948	.0725
3	6.8499	343.00	0.00	343.00	518.688	508.975	14.696	13.754	.3092	0.00	18.08	-121.226	.0725
4	6.9729	345.05	0.00	345.06	518.688	508.859	14.696	13.743	.3111	0.00	16.85	-138.743	.0724
5	7.0952	347.07	0.00	347.07	518.688	508.744	14.696	13.732	.3130	0.00	15.61	-146.198	.0724
6	7.2168	348.98	0.00	348.98	518.688	508.534	14.696	13.721	.3147	0.00	14.36	-138.864	.0723
7	7.3379	350.75	0.00	350.75	518.688	508.532	14.696	13.712	.3163	0.00	13.10	-120.203	.0723
8	7.4584	352.32	0.00	352.32	518.688	508.441	14.696	13.703	.3178	0.00	11.82	-98.403	.0723
9	7.5787	353.65	0.00	353.65	518.688	508.363	14.696	13.696	.3190	0.00	10.53	-78.946	.0722
10	7.6986	354.70	0.00	354.70	518.688	508.302	14.696	13.690	.3200	0.00	9.23	-63.369	.0722
11	7.8185	355.42	0.00	355.42	518.688	508.260	14.696	13.686	.3206	0.00	7.92	-51.343	.0722
12	7.9384	355.77	0.00	355.77	518.688	508.240	14.696	13.684	.3210	0.00	6.60	-42.056	.0722
13	8.0584	355.70	0.00	355.70	518.688	508.244	14.696	13.685	.3209	0.00	5.27	-34.735	.0722
14	8.1789	355.18	0.00	355.18	518.688	508.274	14.696	13.687	.3204	0.00	3.93	-28.836	.0722
15	8.2998	354.14	0.00	354.14	518.688	508.335	14.696	13.693	.3195	0.00	2.59	-24.016	.0722
16	8.4215	352.53	0.00	352.53	518.688	508.423	14.696	13.702	.3180	0.00	1.24	-20.055	.0723
17	8.5442	350.27	0.00	350.27	518.688	508.560	14.696	13.714	.3153	0.00	-.11	-16.799	.0723
18	8.6680	347.29	0.00	347.29	518.688	508.731	14.696	13.731	.3132	0.00	-1.46	-14.124	.0724
19	8.7934	343.52	0.00	343.52	518.688	508.947	14.696	13.751	.3097	0.00	-2.81	-11.931	.0725
20	8.9206	338.88	0.00	338.88	518.688	509.208	14.696	13.776	.3054	0.00	-4.15	-10.141	.0725
21	9.0500	333.30	0.00	333.30	518.688	509.517	14.696	13.805	.3003	0.00	-5.47	-8.690	.0727

STATION 4 FLOW FIELD DESCRIPTION

STREAM -LINE	RADIUS	VELOCITIES MERID	VELOCITIES TANGEN	VELOCITIES TOTAL	TEMPERATURES TOTAL	TEMPERATURES STATIC	PRESSURES TOTAL	PRESSURES STATIC	MACH NO	ANGLES WHIRL	ANGLES SLOPE	RADIUS OF CURVATURE	SPECIFIC WEIGHT
1	6.7500	370.73	0.00	370.73	518.688	507.342	14.696	13.600	.3348	0.00	20.32	-388.054	.0719
2	6.8651	373.69	0.00	373.68	518.688	507.161	14.696	13.583	.3375	0.00	19.23	153.098	.0718
3	6.9795	376.84	0.00	376.84	518.688	506.965	14.696	13.564	.3404	0.00	18.10	80.534	.0717
4	7.0932	380.08	0.00	380.08	518.688	506.762	14.696	13.545	.3434	0.00	16.93	62.104	.0717
5	7.2062	383.31	0.00	383.31	518.688	506.553	14.696	13.526	.3464	0.00	15.72	55.364	.0716
6	7.3184	386.45	0.00	386.45	518.688	506.359	14.696	13.508	.3493	0.00	14.47	54.979	.0715
7	7.4300	389.41	0.00	389.41	518.688	506.170	14.696	13.490	.3520	0.00	13.17	60.787	.0715
8	7.5411	392.11	0.00	392.11	518.688	505.995	14.696	13.474	.3545	0.00	11.83	74.719	.0714
9	7.6517	394.45	0.00	394.46	518.688	505.843	14.696	13.459	.3567	0.00	10.46	105.996	.0714
10	7.7620	396.42	0.00	396.42	518.688	505.715	14.696	13.447	.3585	0.00	9.05	207.792	.0713
11	7.8721	397.95	0.00	397.95	518.688	505.614	14.696	13.438	.3599	0.00	7.6[illegible]	3352.290	.0713
12	7.9822	399.07	0.00	399.07	518.688	505.541	14.696	13.431	.3610	0.00	6.21	-271.746	.0712
13	8.0924	399.78	0.00	399.79	518.688	505.494	14.696	13.427	.3616	0.00	4.77	-130.212	.0712
14	8.2029	400.05	0.00	400.06	518.688	505.475	14.696	13.425	.3619	0.00	3.29	-80.485	.0712
15	8.3137	399.84	0.00	399.84	518.688	505.490	14.696	13.426	.3617	0.00	1.78	-54.234	.0712
16	8.4252	399.04	0.00	399.04	518.688	505.543	14.696	13.431	.3610	0.00	.23	-38.655	.0712
17	8.5375	397.57	0.00	397.57	518.688	505.640	14.696	13.440	.3596	0.00	-1.36	-28.763	.0713
18	8.6507	395.32	0.00	395.32	518.688	505.787	14.696	13.454	.3575	0.00	-3.00	-21.933	.0713
19	8.7653	392.14	0.00	392.14	518.688	505.994	14.696	13.473	.3545	0.00	-4.69	-16.904	.0714
20	8.8816	387.84	0.00	387.84	518.688	506.271	14.696	13.499	.3506	0.00	-6.45	-13.138	.0715
21	9.0000	382.22	0.00	382.22	518.688	506.628	14.696	13.533	.3454	0.00	-8.25	-10.317	.0716

BLADE DATA

LOCATION	BLADE-ANGLES SECTION	BLADE-ANGLES LEAN	REL FLOW ANGLE	DEVIATION INCIDENCE	LOSS COEFF	BLADE SPEED	RELATIVE MACH NO	RELATIVE VELOCITY	RELATIVE PRESSURE	RELATIVE TEMPERATURE	PRESSURE RATIO	DELTA T ON T	ISENTROPIC EFFICIENCY	POLYTROPIC EFFICIENCY
1	-62.667	17.205	-72.816	-10.150	0.0000	1198.8	1.1331	1254.86	30.258	637.381	1.000	0.000	1.0000	1.0000
2	-62.598	16.402	-72.961	-10.363	0.0000	1219.3	1.1517	1275.26	30.943	641.143	1.000	0.000	1.0000	1.0000
3	-62.539	15.461	-73.091	-10.492	0.0000	1239.6	1.1703	1295.62	31.647	645.248	1.000	0.000	1.0000	1.0000
4	-62.663	14.188	-73.211	-10.548	0.0000	1259.8	1.1883	1315.88	32.369	649.392	1.000	0.000	1.0000	1.0000
5	-62.726	12.809	-73.327	-10.601	0.0000	1279.9	1.2073	1336.03	33.110	653.576	1.000	0.000	1.0000	1.0000
6	-62.760	11.481	-73.442	-10.682	0.0000	1299.8	1.2255	1356.03	33.870	657.798	1.000	0.000	1.0000	1.0000
7	-62.813	10.328	-73.559	-10.746	0.0000	1319.6	1.2438	1375.88	34.650	662.059	1.000	0.000	1.0000	1.0000
8	-62.916	9.401	-73.682	-10.766	0.0000	1339.3	1.2615	1395.56	35.451	666.363	1.000	0.000	1.0000	1.0000
9	-63.042	8.570	-73.814	-10.772	0.0000	1359.0	1.2796	1415.08	36.274	670.711	1.000	0.000	1.0000	1.0000
10	-63.165	7.706	-73.957	-10.792	0.0000	1378.6	1.2973	1434.44	37.120	675.109	1.000	0.000	1.0000	1.0000
11	-63.286	6.867	-74.112	-10.826	0.0000	1398.1	1.3148	1453.67	37.992	679.562	1.000	0.000	1.0000	1.0000
12	-63.413	6.108	-74.278	-10.865	0.0000	1417.7	1.3322	1472.79	38.890	684.075	1.000	0.000	1.0000	1.0000
13	-63.543	5.635	-74.456	-10.913	0.0000	1437.3	1.3495	1491.83	39.817	688.655	1.000	0.000	1.0000	1.0000
14	-63.663	5.237	-74.645	-10.982	0.0000	1456.9	1.3667	1510.81	40.775	693.306	1.000	0.000	1.0000	1.0000
15	-63.768	4.915	-74.848	-11.081	0.0000	1476.6	1.3838	1529.75	41.767	698.037	1.000	0.000	1.0000	1.0000
16	-63.861	4.571	-75.068	-11.207	0.0000	1496.4	1.4009	1548.66	42.795	702.855	1.000	0.000	1.0000	1.0000
17	-63.952	4.128	-75.308	-11.356	0.0000	1516.3	1.4178	1567.56	43.863	707.771	1.000	0.000	1.0000	1.0000
18	-64.059	3.595	-75.571	-11.511	0.0000	1536.4	1.4347	1586.47	44.974	712.797	1.000	0.000	1.0000	1.0000
19	-64.19[illegible]	2.997	-75.862	-11.665	0.0000	1556.8	1.4515	1605.41	46.134	717.947	1.000	0.000	1.0000	1.0000
20	-64.346	2.369	-76.187	-11.841	0.0000	1577.4	1.4583	1624.41	47.349	723.239	1.000	0.000	1.0000	1.0000
21	-64.476	1.836	-76.552	-12.076	0.0000	1598.5	1.4851	1643.52	48.626	728.596	1.000	0.000	1.0000	1.0000

STATION 5 FLOW FIELD DESCRIPTION

STREAM LINE	RADIUS	VELOCITIES MERID	VELOCITIES TANGEN	VELOCITIES TOTAL	TEMPERATURES TOTAL	TEMPERATURES STATIC	PRESSURES TOTAL	PRESSURES STATIC	MACH NO	ANGLES WHIRL	ANGLES SLOPE	RADIUS OF CURVATURE	SPECIFIC WEIGHT
1	6.8979	400.31	138.21	423.50	546.630	531.834	17.349	15.757	.3735	19.05	22.32	6.199	.0794
2	7.0053	404.04	138.53	427.13	547.129	532.079	17.372	15.753	.3767	18.92	21.22	6.528	.0794
3	7.1114	407.33	138.53	430.30	547.561	532.287	17.390	15.747	.3794	18.78	19.97	7.158	.0793
4	7.2165	410.37	138.27	433.04	547.931	532.462	17.402	15.739	.3817	18.62	18.60	8.251	.0793
5	7.3204	413.45	137.97	435.87	548.289	532.617	17.415	15.731	.3842	18.45	17.13	10.122	.0792
6	7.4232	416.85	137.84	439.06	548.675	532.774	17.434	15.725	.3869	18.30	15.57	13.474	.0791
7	7.5250	420.06	138.17	442.20	549.159	533.023	17.455	15.722	.3896	18.21	13.94	20.567	.0791
8	7.6260	422.55	139.26	444.91	549.812	533.484	17.479	15.724	.3918	18.24	12.25	44.958	.0790
9	7.7263	424.64	140.42	447.26	550.484	533.983	17.506	15.734	.3937	18.30	10.51	-209.097	.0790
10	7.8261	426.27	142.44	449.44	551.356	534.695	17.541	15.750	.3954	18.48	8.74	-31.484	.0790
11	7.9258	427.05	146.68	451.55	552.756	535.939	17.581	15.775	.3968	18.96	6.96	-17.377	.0789
12	8.0254	427.80	150.93	453.65	554.185	537.211	17.629	15.807	.3981	19.43	5.24	-12.363	.0789
13	8.1251	428.63	154.63	455.73	555.505	538.377	17.686	15.845	.3995	19.83	3.52	-9.940	.0789
14	8.2249	429.67	157.80	457.75	556.736	539.455	17.749	15.890	.4009	20.17	1.83	-8.655	.0790
15	8.3247	430.54	161.14	459.71	557.996	540.568	17.817	15.939	.4022	20.52	.15	-8.032	.0791
16	8.4248	431.02	165.07	461.55	559.439	541.872	17.887	15.992	.4033	20.96	-1.51	-7.919	.0791
17	8.5252	431.07	169.02	463.02	560.908	543.230	17.955	16.047	.4041	21.41	-3.13	-8.353	.0792
18	8.6261	430.77	171.76	463.75	562.100	544.357	18.017	16.100	.4043	21.74	-4.72	-9.594	.0793
19	8.7277	430.02	173.28	463.62	563.002	545.273	18.067	16.148	.4039	21.95	-6.29	-12.565	.0794
20	8.8302	428.45	174.54	462.64	563.846	546.198	18.101	16.189	.4027	22.16	-7.85	-22.046	.0795
21	8.9340	425.85	175.75	460.63	564.694	547.195	18.112	16.218	.4006	22.43	-9.38	-1665.883	.0795

BLADE DATA

LOCAT -ION	BLADE-ANGLES SECTION	LEAN	REL FLOW ANGLE	DEVIATION INCIDENCE	LOSS COEFF	BLADE SPEED	RELATIVE MACH NO	RELATIVE VELOCITY	RELATIVE PRESSURE	RELATIVE TEMPERATURE	PRESSURE RATIO	DELTA T ON T	ISENTROPIC EFFICIENCY	POLYTROPIC EFFICIENCY
1	-60.252	10.432	-69.731	-9.529	.0335	1225.1	1.0215	1158.27	30.585	642.312	1.181	.054	.8994	.9018
2	-60.355	9.957	-69.926	-9.500	.0362	1244.2	1.0381	1177.17	31.181	646.181	1.182	.055	.8910	.8935
3	-60.503	9.042	-70.085	-9.562	.0385	1263.0	1.0545	1195.03	31.790	650.063	1.183	.056	.8830	.8858
4	-60.660	7.519	-70.257	-9.597	.0407	1281.7	1.0709	1214.83	32.413	653.960	1.184	.056	.8757	.8786
5	-60.811	6.635	-70.417	-9.600	.0425	1300.1	1.0872	1233.53	33.051	657.873	1.185	.057	.8690	.8722
6	-60.941	5.539	-70.552	-9.611	.0441	1318.4	1.1033	1252.01	33.703	661.798	1.186	.058	.8632	.8665
7	-61.069	4.726	-70.632	-9.613	.0464	1336.5	1.1188	1269.82	34.353	665.737	1.188	.059	.8559	.8593
8	-61.212	4.155	-70.925	-9.614	.0501	1354.4	1.1330	1285.53	34.979	669.695	1.189	.060	.8446	.8483
9	-61.365	3.736	-70.979	-9.615	.0535	1372.2	1.1469	1302.95	35.623	673.679	1.191	.061	.8345	.8385
10	-61.518	3.317	-71.135	-9.618	.0582	1390.0	1.1597	1318.35	36.247	677.695	1.194	.063	.8215	.8259
11	-61.666	2.858	-71.290	-9.624	.0672	1407.7	1.1598	1331.35	36.776	681.754	1.196	.066	.7982	.8033
12	-61.809	2.413	-71.444	-9.635	.0755	1425.4	1.1798	1344.32	37.328	685.364	1.200	.068	.7781	.7838
13	-61.944	2.049	-71.597	-9.653	.0813	1443.1	1.1904	1357.89	37.938	690.027	1.203	.071	.7637	.7698
14	-62.072	1.901	-71.749	-9.677	.0865	1460.8	1.2015	1371.95	38.600	694.241	1.208	.073	.7536	.7601
15	-62.192	1.839	-71.902	-9.710	.0912	1478.5	1.2126	1385.95	39.293	698.509	1.212	.076	.7445	.7514
16	-62.308	1.792	-72.054	-9.752	.0969	1495.3	1.2223	1399.26	39.944	702.336	1.217	.079	.7333	.7406
17	-62.427	1.773	-72.211	-9.804	.1023	1514.1	1.2329	1412.49	40.615	707.231	1.222	.081	.7219	.7297
18	-62.559	1.832	-72.[illegible]	-9.869	.1063	1532.1	1.2441	1426.87	41.303	711.599	1.226	.084	.7144	.7225
19	-62.708	1.833	-72.655	-9.947	.1091	1550.1	1.2565	1442.41	42.186	716.249	1.229	.085	.7097	.7180
20	-62.874	1.743	-72.912	-10.039	.1120	1566.3	1.2692	1458.14	43.015	720.892	1.232	.087	.7029	.7115
21	-63.056	1.554	-73.206	-10.150	.1164	1586.7	1.2817	1473.84	43.824	725.545	1.232	.089	.6921	.7011

STATION 5 INTEGRATED PERFORMANCE PRESSURE RATIO = 1.204 ISEN. EFF.= .779 POLY. EFF.= .785 DELTA T ON T = .070

STATION 5 FLOW FIELD DESCRIPTION

STREAM -LINE	RADIUS	VELOCITIES MERID	TANGEN	TOTAL	TEMPERATURES TOTAL	STATIC	PRESSURES TOTAL	STATIC	MACH NO	ANGLES WHIRL	SLOPE	RADIUS OF CURVATURE	SPECIFIC WEIGHT
1	7.0734	385.02	300.53	488.45	581.012	561.350	21.117	18.712	.4194	37.98	27.37	4.302	.0894
2	7.1757	392.64	293.41	493.33	581.412	561.356	21.089	18.643	.4236	37.22	25.19	6.106	.0891
3	7.2703	400.07	296.92	498.21	581.921	561.465	21.079	18.590	.4273	36.58	22.95	9.714	.0888
4	7.3623	406.18	295.74	502.44	582.466	561.564	21.079	18.552	.4313	36.06	20.67	20.087	.0886
5	7.4527	411.51	2[illegible].33	506.25	583.061	561.942	21.090	18.527	.4345	35.63	18.35	267.222	.0884
6	7.5413	416.60	294.55	510.21	583.752	562.302	21.116	18.515	.4377	35.26	15.03	-28.256	.0883
7	7.6236	42[illegible].39	295.54	514.75	584.746	562.913	21.162	18.515	.4414	35.05	13.72	-14.862	.0882
8	7.7147	425.34	298.85	519.85	586.222	563.955	21.227	18.528	.4454	35.10	11.44	-10.921	.0881
9	7.8001	428.85	302.25	524.55	587.738	565.057	21.301	18.551	.4491	35.17	9.20	-9.223	.0880
10	7.8850	431.27	307.31	529.59	589.657	566.553	21.384	18.583	.4527	35.47	7.01	-8.420	.0880
11	7.9730	431.35	317.35	535.52	592.702	569.139	21.484	18.624	.4567	36.34	4.89	-8.085	.0877
12	8.0556	431.22	327.12	541.25	595.856	571.725	21.589	18.671	.4606	37.18	2.89	-8.080	.0876
13	8.1417	431.32	335.06	546.17	598.571	574.003	21.693	18.722	.4638	37.84	1.00	-8.381	.0875
14	8.2[illegible]44	431.48	341.35	550.18	600.933	576.005	21.791	18.777	.4664	38.35	-.77	-9.017	.0874
15	8.3159	431.15	347.32	553.55	603.258	578.017	21.885	18.833	.4686	38.85	-2.42	-10.082	.0874
16	8.4041	429.91	354.72	557.05	605.972	580.422	21.978	18.890	.4705	39.55	-3.93	-11.810	.0873
17	8.4937	426.74	362.12	559.53	608.737	582.949	22.062	18.948	.4717	40.32	-5.29	-14.740	.0872
18	8.5847	423.54	366.61	560.27	610.827	584.995	22.122	19.005	.4713	40.88	-6.49	-20.138	.0871
19	8.6771	419.71	368.40	558.45	612.272	586.600	22.158	19.060	.4692	41.27	-7.57	-31.667	.0871
20	8.7714	414.23	370.36	555.60	613.749	588.376	22.177	19.114	.4661	41.80	-8.54	-68.125	.0871
21	8.8679	406.48	373.52	552.04	615.553	590.571	22.182	19.164	.4623	42.58	-9.38	1665.883	.0870

BLADE DATA

LOCAT-ION	BLADE-ANGLES SECTION	LEAN	REL FLOW ANGLE	DEVIATION INCIDENCE	LOSS COEFF	BLADE SPEED	RELATIVE MACH NO	RELATIVE VELOCITY	RELATIVE PRESSURE	RELATIVE TEMPERATURE	PRESSURE RATIO	DELTA T ON T	ISENTROPIC EFFICIENCY	POLYTROPIC EFFICIENCY
1	-54.590	3.732	-58.076	-13.486	.0679	1257.2	.8854	1031.16	31.142	648.349	1.437	.120	[illegible]	.9103
2	-54.726	3.242	-58.376	-13.350	.0733	1274.5	.9035	1052.14	31.636	652.443	1.435	.121	.8965	.9016
3	-54.008	2.454	-58.383	-13.195	.0760	1291.3	.9202	1071.79	32.131	655.380	1.434	.122	[illegible]	.8936
4	-55.104	1.486	-58.129	-13.025	.0821	1307.5	.9360	1090.36	32.630	659.473	1.434	.123	.8804	.8863
5	-55.350	.545	-58.139	-12.84[?]	.0856	1323.7	.9509	1108.02	33.136	662.334	1.435	.124	.8735	.8798
6	-55.591	-.171	-58.262	-12.671	.0885	1339.4	.9551	1124.83	33.648	666.373	1.437	.125	.8674	.8740
7	-55.810	-.597	-58.306	-12.496	.0930	1354.9	.9775	1139.98	34.132	669.797	1.440	.127	.8598	.8668
8	-55.015	-.802	-58.345	-12.330	.1003	1370.2	.9875	1152.65	34.549	673.217	1.444	.130	.8483	.8560
9	-55.220	-.851	-58.398	-12.178	.1070	1385.3	.9970	1164.92	34.978	676.643	1.449	.133	.8388	.8462
10	-55.426	-.815	-58.469	-12.043	.1163	1400.4	1.0044	1175.11	35.343	680.188	1.455	.137	.8243	.8334
11	-56.626	-.775	-58.565	-11.930	.1342	1415.6	1.0062	1179.85	35.493	683.573	1.462	.143	.8081	.8185
12	-56.816	-.737	-58.657	-11.842	.1508	1430.7	1.0082	1184.86	35.666	687.117	1.469	.147	.7784	.7901
13	-57.000	-.844	-58.782	-11.781	.1635	1446.0	1.0121	1191.75	35.927	690.722	1.476	.154	.7618	.7745
14	-57.180	-.832	-58.932	-11.753	.1732	1461.4	1.0175	1200.30	36.265	694.390	1.483	.159	.7489	.7624
15	-57.351	-.501	-59.109	-11.759	.1823	1476.9	1.0233	1209.09	36.618	698.125	1.48[?]	.163	.7368	.7511
16	-57.518	-.128	-59.321	-11.803	.1940	1492.6	1.0272	1216.26	36.901	701.938	1.496	.168	.7218	.7371
17	-57.693	.420	-65.582	-11.883	.2060	1508.[?]	1.0303	1223.26	37.170	705.846	1.501	.174	.7066	.7228
18	-57.890	1.023	-59.911	-12.022	.2140	1524.7	1.0374	1233.10	37.577	709.258	1.505	.178	.6955	.7125
19	-58.108	1.530	-70.300	-12.200	.2186	1541.1	1.0465	1245.56	38.098	713.377	1.508	.180	.6876	.7051
20	-58.347	2.052	-70.770	-12.423	.2244	1557.9	1.0551	1257.66	38.602	718.220	1.509	.183	.6782	.6961
21	-58.608	2.366	-71.308	-12.700	.2323	1575.0	1.0621	1268.37	39.034	722.511	1.509	.187	.6655	.6842

STATION [illegible] INTEGRATED PERFORMANCE PRESSURE RATIO = 1.479 ISEN. EFF. = .774 POLY. EFF. = .786 DELTA T ON T = .158

STATION 7 FLOW FIELD DESCRIPTION

STREAM-LINE	RADIUS	VELOCITIES MERID	TANGEN	TOTAL	TEMPERATURES TOTAL	STATIC	PRESSURES TOTAL	STATIC	MACH NO	ANGLES WHIRL	SLOPE	RADIUS OF CURVATURE	SPECIFIC WEIGHT
1	7.3120	543.95	400.14	675.29	604.356	566.800	23.843	19.031	.5771	36.34	26.61	-3.372	.0900
2	7.3816	544.62	400.23	675.85	605.189	567.568	23.829	19.018	.5772	36.31	23.47	-3.227	.0899
3	7.4502	545.87	402.01	677.93	596.380	568.531	23.869	19.032	.5785	36.37	20.43	-3.139	.0898
4	7.5182	547.06	404.77	680.53	607.787	569.649	23.946	19.069	.5801	36.50	17.49	-3.105	.0898
5	7.5850	547.74	408.03	683.01	609.307	570.392	24.043	19.125	.5816	36.68	14.67	-3.121	.0898
6	7.6531	548.14	411.75	685.56	610.941	572.241	24.162	19.198	.5831	36.91	11.97	-3.177	.0900
7	7.7203	547.65	417.20	688.63	612.982	573.938	24.302	19.284	.5843	37.29	9.41	-3.265	.0901
8	7.7879	546.40	425.82	692.73	615.766	576.259	24.469	19.382	.5872	37.93	6.98	-3.383	.0902
9	7.8559	545.35	434.83	697.49	618.680	578.634	24.659	19.490	.5900	38.57	4.70	-3.537	.0903
10	7.9245	542.93	[illegible]	703.04	622.283	581.598	24.869	19.607	.5932	39.44	2.58	-3.741	.0904
11	7.9943	535.94	466.42	710.43	627.613	586.275	25.100	19.730	.5971	41.03	.62	-4.012	.0902
12	8.0658	528.44	485.85	717.84	633.364	590.971	25.337	19.857	.6009	42.60	-1.15	-4.376	.0901
13	8.1391	521.64	502.22	724.11	638.293	595.165	25.554	19.986	.6040	43.91	-2.73	-4.862	.0900
14	8.2142	515.36	515.04	729.02	642.610	598.903	25.772	20.115	.6062	45.02	-4.13	-5.508	.0901
15	8.2909	508.37	528.40	733.25	646.852	602.545	25.958	20.241	.6079	46.11	-5.35	-6.378	.0901
16	8.3698	498.94	543.60	738.05	651.827	607.054	26.163	20.366	.6096	47.46	-6.42	-7.624	.0900
17	8.4512	488.09	559.50	742.48	656.980	611.583	26.349	20.488	.6110	48.90	-7.27	-9.643	.0898
18	8.5351	478.37	570.07	744.19	660.986	615.480	26.491	20.606	.6105	50.00	-7.93	-13.396	.0898
19	8.6214	469.59	575.72	742.95	663.840	618.493	26.586	20.721	.6081	50.80	-8.48	-21.521	.0898
20	8.7101	459.02	582.14	741.34	665.959	621.816	26.666	20.832	.6051	51.74	-8.96	-46.578	.0898
21	8.8019	445.38	591.64	740.54	670.952	625.315	26.750	20.941	.6025	53.03	-9.37	*956875.344	.0897

BLADE DATA

LOCAT -ION	BLADE-ANGLES SECTION	LEAN	REL FLOW ANGLE	DEVIATION INCIDENCE	LOSS COEFF	BLADE SPEED	RELATIVE MACH NO	RELATIVE VELOCITY	RELATIVE PRESSURE	RELATIVE TEMPERATURE	PRESSURE RATIO	DELT. T ON T	ISENTROPIC EFFICIENCY	POLYTROPIC EFFICIENCY
1	-42.577	-5.962	-58.810	-16.233	.1043	1298.7	.8975	1050.34	32.088	[illegible]	1.622	.165	.8948	.9017
2	-43.165	-5.845	-59.122	-15.937	.1117	1311.0	.9063	1061.19	32.370	650.201	1.621	.167	.8851	.8926
3	-43.719	-5.634	-59.350	-15.631	.1182	1323.2	.9137	1070.79	32.657	662.838	1.624	.169	.8763	.8844
4	-44.229	-5.437	-59.546	-15.319	.1238	1335.3	.9202	1079.41	32.954	665.473	1.629	.172	.8685	.8772
5	-44.740	-5.235	-59.751	-15.006	.1287	1347.4	.9259	1087.30	33.260	668.113	1.636	.175	.8616	.8788
6	-45.252	-4.842	-59.950	-14.698	.1330	1359.2	.9310	1094.62	33.577	670.766	1.644	.178	.8553	.8651
7	-45.731	-4.394	-60.132	-14.400	.1393	1371.2	.9343	1100.10	33.851	673.442	1.654	.182	.8473	.8577
8	-46.165	-3.854	-60.285	-14.120	.1502	1383.2	.9343	1102.31	34.022	676.151	1.665	.187	.8349	.8463
9	-46.549	-3.246	-60.411	-13.862	.1601	1395.2	.9342	1104.45	34.209	678.901	1.678	.193	.8238	.8361
10	-46.892	-2.631	-60.527	-13.635	.1740	1407.4	.9312	1103.62	34.296	681.700	1.692	.200	.8091	.8226
11	-47.212	-2.072	[illegible]	[illegible]	.2013	1419.8	.9192	1093.73	34.056	684.574	1.708	.210	.7826	.7982
12	-47.529	-1.628	-60.830	-13.301	.2258	1432.5	.9075	1084.19	33.841	687.544	1.724	.221	.7587	.7763
13	-47.854	-1.271	-61.069	-13.205	.2451	1445.6	.8992	1077.96	33.752	690.614	1.739	.231	.7402	.7595
14	-48.183	-.917	-61.349	-13.166	.2597	1458.9	.8938	1074.85	33.771	693.785	1.754	.239	.7257	.7464
15	-48.50	-.473	-61.599	-13.192	.2736	1472.5	.8889	1072.29	33.805	697.059	1.767	.247	.7119	.7338
16	-48.922	.133	-62.110	-13.287	.2913	1486.5	.8811	1065.62	33.726	700.452	1.780	.257	.6950	.7185
17	-49.135	.773	[illegible]	-13.461	.3094	1501.0	.8727	1060.48	33.627	703.967	1.793	.267	.6779	.7829
18	-49.451	1.484	-63.171	-13.720	.3214	1515.9	.8595	1059.91	33.710	707.567	1.803	.274	.6654	.6916
19	-49.766	2.104	-63.827	-14.001	.3283	1531.2	.8713	1064.65	33.960	711.436	1.809	.280	.6565	.6836
20	-50.075	2.729	-64.557	-14.462	.3363	1547.0	.8721	1068.45	34.170	715.456	1.815	.286	.6462	.6742
21	-50.376	3.033	-65.374	-14.998	.3492	1563.3	.8695	1068.85	34.257	719.503	1.820	.294	.6329	.6620

STATION 2 INTEGRATED PERFORMANCE PRESSURE RATIO = 1.720 ISEN. EFF. = .749 POLY. EFF. = .767 DELTA T ON T = .223

STATION 3 FLOW FIELD DESCRIPTION

STREAM -LINE	RADIUS	VELOCITIES MERID	VELOCITIES TANGEN	VELOCITIES TOTAL	TEMPERATURES TOTAL	TEMPERATURES STATIC	PRESSURES TOTAL	PRESSURES STATIC	MACH NO	ANGLES WHIRL	ANGLES SLOPE	RADIUS OF CURVATURE	SPECIFIC WEIGHT
1	7.4792	740.20	597.75	951.42	649.471	575.003	30.250	19.710	.8073	38.92	16.56	-1.883	.0920
2	7.5231	722.34	595.99	936.47	649.851	577.711	30.091	19.891	.7928	39.53	14.30	-2.221	.0923
3	7.5683	706.52	594.45	923.33	650.295	580.169	29.948	20.046	.7800	40.08	12.13	-2.671	.0927
4	7.6146	692.23	593.12	911.95	650.802	582.399	29.823	20.178	.7689	40.57	10.04	-3.277	.0929
5	7.6622	680.81	592.01	902.20	651.378	584.432	29.717	20.290	.7594	41.01	8.02	-4.107	.0931
6	7.7110	670.54	591.16	893.92	652.030	586.313	29.629	20.388	.7512	41.40	6.07	-5.273	.0932
7	7.7611	660.31	59[illegible].19	886.95	653.128	588.434	29.553	20.474	.7440	41.89	4.17	-5.944	.0933
8	7.8127	648.33	597.00	881.33	655.114	591.246	29.488	20.553	.7376	42.64	2.32	-9.333	.0932
9	7.8659	637.37	602.17	876.84	657.228	594.016	29.448	20.629	.7321	43.37	.53	-12.557	.0931
10	7.9211	624.41	611.53	873.99	660.355	597.565	29.435	20.707	.7276	44.40	-1.20	-16.181	.0929
11	7.9736	603.15	633.41	874.65	666.471	603.604	29.473	20.792	.7245	46.40	-2.86	-18.550	.0924
12	8.0395	582.27	657.03	877.91	673.127	609.811	29.585	20.890	.7236	48.45	-4.40	-18.227	.0919
13	8.1036	564.47	678.66	882.72	679.457	615.465	29.762	21.004	.7242	50.25	-5.79	-16.188	.0915
14	8.1706	549.37	698.21	888.43	685.435	620.532	29.991	21.133	.7259	51.80	-7.04	-13.923	.0913
15	8.2407	534.13	719.02	895.71	691.849	626.001	30.276	21.279	.7287	53.39	-8.12	-12.132	.0911
16	8.3141	514.55	746.61	906.74	700.057	632.604	30.652	21.441	.7339	55.43	-9.02	-10.640	.0909
17	8.3917	493.05	777.72	920.85	709.331	639.797	31.122	21.624	.7411	57.63	-9.70	-9.399	.0906
18	8.4732	476.53	802.91	933.70	717.377	645.919	31.612	21.826	.7480	59.31	-10.12	-8.816	.0906
19	8.5579	465.67	822.00	944.74	724.097	650.965	32.100	22.040	.7539	60.47	-10.28	-9.246	.0908
20	8.6452	453.73	844.31	959.02	731.929	656.603	32.663	22.257	.7621	61.77	-10.14	-12.513	.0909
21	8.7359	437.12	875.06	973.17	741.793	663.471	33.329	22.465	.7733	63.46	-9.37	*516564.766	.0908

BLADE DATA

LOCAT-ION	BLADE-ANGLES SECTION	BLADE-ANGLES LEAN	REL FLOW ANGLE	DEVIATION INCIDENCE	LOSS COEFF	BLADE SPEED	RELATIVE MACH NO	RELATIVE VELOCITY	RELATIVE PRESSURE	RELATIVE TEMPERATURE	PRESSURE RATIO	DELTA T ON T	ISENTROPIC EFFICIENCY	POLYTROPIC EFFICIENCY
1	-25.429	-6.276	-44.026	-19.197	.1384	1328.4	.8825	1040.04	32.697	663.357	2.058	.252	.9047	.9138
2	-25.513	-5.931	-45.098	-19.166	.1479	1335.2	.8755	1034.22	32.753	665.563	2.048	.253	.8947	.9047
3	-27.528	-5.470	-46.039	-19.171	.1564	1344.2	.8702	1030.17	32.823	667.425	2.038	.254	.8852	.8960
4	-28.470	-4.930	-47.525	-19.154	.1633	1352.4	.8665	1027.81	32.912	669.246	2.029	.255	.8760	.8877
5	-29.340	-4.2?5	-48.475	-19.135	.1704	1360.3	.8644	1026.95	33.018	671.127	2.022	.256	.8674	.8798
6	-30.141	-3.531	-49.256	-19.115	.1761	1369.5	.8534	1027.36	33.140	673.369	2.016	.257	.8591	.8722
7	-30.881	-2.792	-49.375	-19.094	.1843	1378.4	.8613	1026.72	33.207	675.174	2.011	.259	.8486	.8627
8	-31.572	-2.000	-50.546	-19.074	.1993	1387.6	.8557	1022.43	33.138	677.152	2.007	.263	.8333	.8487
9	-32.222	-1.350	-51.275	-19.053	.2127	1397.0	.8507	1018.84	33.083	679.311	2.004	.267	.8188	.8355
10	-32.830	-.697	-51.853	-19.033	.2315	1406.8	.8417	1011.12	32.907	681.559	2.003	.273	.8001	.8185
11	-33.401	-.086	-52.415	-19.013	.2076	1417.1	.8191	988.8?	32.289	683.328	2.005	.285	.7685	.7898
12	-33.939	.461	-52.933	-18.994	.3011	1427.9	.7962	966.03	31.704	686.447	2.013	.298	.7397	.7637
13	-34.444	.925	-53.419	-18.975	.3263	1439.2	.7771	947.16	31.284	689.121	2.025	.310	.7171	.7474
14	-34.927	1.317	-53.884	-18.957	.3467	1451.2	.7515	932.06	31.009	691.342	2.041	.321	.6996	.7278
15	-35.402	1.603	-54.349	-18.943	.3655	1463.6	.7455	916.34	30.752	694.312	2.060	.334	.6834	.7134
16	-35.890	2.000	-54.822	-18.933	.3892	1476.6	.7229	893.14	30.343	698.352	2.086	.350	.6647	.6970
17	-36.395	2.348	-55.323	-18.928	.4133	1490.4	.6375	865.63	29.909	701.398	2.118	.368	.6468	.6813
18	-35.896	2.687	-55.827	-18.931	.4293	1504.9	.6797	848.48	29.718	704.351	2.151	.383	.6348	.6712
19	-37.345	2.946	-56.283	-18.943	.4383	1519.3	.6695	839.02	29.746	708.574	2.184	.396	.6277	.6654
20	-37.729	3.214	-56.594	-18.966	.4494	1535.4	.6565	825.25	29.708	712.551	2.223	.411	.6196	.6589
21	-38.132	3.347	-57.131	-18.999	.4655	1551.6	.6367	805.42	29.493	716.517	2.268	.430	.6087	.6500

STATION 8 INTEGRATED PERFORMANCE PRESSURE RATIO = 2.?07 ISEN. EFF. = .734 POLY. EFF. = .759 DELTA T ON T = .313

STATION 9 FLOW FIELD DESCRIPTION

STREAM-LINE	RADIUS	VELOCITIES MERID	VELOCITIES TANGEN	VELOCITIES TOTAL	TEMPERATURES TOTAL	TEMPERATURES STATIC	PRESSURES TOTAL	PRESSURES STATIC	MACH NO	ANGLES WHIRL	ANGLES SLOPE	RADIUS OF CURVATURE	SPECIFIC WEIGHT
1	7.5499	773.03	790.80	1105.85	593.165	592.713	37.492	21.598	.9243	45.65	8.54	-5.825	.0977
2	7.5855	762.92	795.88	1102.48	695.106	595.279	37.508	21.722	.9195	46.21	7.86	-9.008	.0979
3	7.6222	754.48	800.72	1100.13	597.029	597.529	37.525	21.821	.9158	46.70	7.15	-17.753	.0979
4	7.6598	747.??	80?.21	1098.8?	698.908	599.767	37.541	21.897	.9131	47.12	6.39	-165.280	.0979
5	7.6935	742.35	809.35	1098.24	700.740	601.710	37.556	21.952	.9112	47.47	5.60	24.297	.0978
6	7.7381	738.47	813.20	1098.47	702.538	603.477	37.571	21.988	.9100	47.76	4.77	11.567	.0977
7	7.7730	734.02	819.30	1100.01	704.876	605.549	37.589	22.005	.9097	48.14	3.90	7.642	.0974
8	7.8203	726.53	830.53	1103.46	708.424	608.490	37.615	22.005	.9104	48.82	2.99	5.707	.0970
9	7.8633	720.15	841.54	1107.01	711.976	611.306	37.642	21.989	.9118	49.44	2.04	4.547	.0965
10	7.9077	709.63	867.94	1112.66	716.623	615.058	37.643	21.957	.9131	50.38	1.05	3.773	.0957
11	7.9543	681.79	887.12	1118.85	724.735	622.083	37.568	21.915	.9131	52.46	.02	3.234	.0945
12	8.0043	651.33	917.53	1125.21	733.085	629.310	37.490	21.872	.9130	54.63	-1.?4	2.863	.0932
13	8.0579	623.95	943.25	1130.95	740.525	635.734	37.421	21.831	.9131	56.52	-2.11	2.616	.0921
14	8.1154	600.09	964.54	1135.98	747.103	641.419	37.360	21.795	.9132	58.11	-3.17	2.458	.0911
15	8.1768	573.74	985.85	1140.64	753.867	647.355	37.297	21.769	.9127	59.80	-4.21	2.372	.0902
16	8.2428	547.64	1032.15	1168.38	766.801	655.124	37.977	21.764	.9295	62.05	-5.24	2.348	.0891
17	8.3144	513.76	1086.20	1201.58	781.937	663.924	38.890	21.793	.9496	64.69	-6.26	2.398	.0880
18	8.3924	483.76	1125.53	1225.03	793.920	671.37?	39.611	21.866	.9629	66.74	-7.22	2.580	.0873
19	8.4763	461.28	1150.08	1239.14	802.653	677.304	40.134	21.985	.9697	68.14	-8.07	2.996	.0870
20	8.5?70	427.31	1178.33	1253.42	812.044	684.472	40.732	22.159	.9758	70.07	-8.74	4.152	.0868
21	8.6639	365.87	1215.95	1269.81	825.539	694.110	41.506	22.428	.9818	73.25	-8.95	20.749	.0866

BLADE DATA

LOCATION	BLADE-ANGLES SECTION	BLADE-ANGLES LEAN	REL FLOW ANGLE	DEVIATION INCIDENCE	LOSS COEFF	BLADE SPEED	RELATIVE MACH NO	RELATIVE VELOCITY	RELATIVE PRESSURE	RELATIVE TEMPERATURE	PRESSURE RATIO	DELTA T ON T	ISENTROPIC EFFICIENCY	POLYTROPIC EFFICIENCY
1	-11.816	2.399	-35.437	-23.021	.1703	1340.3	.7930	948.78	32.680	666.707	2.551	.336	.9071	.9184
2	-12.710	2.530	-35.355	-23.146	.1824	1347.2	.7851	941.29	32.612	668.102	2.552	.340	.8975	.9100
3	-13.622	2.614	-36.241	-22.619	.1933	1353.7	.7707	935.46	32.556	669.544	2.553	.344	.8883	.9019
4	-14.539	3.004	-36.533	-22.053	.2043	1360.4	.7739	931.27	32.516	671.034	2.554	.347	.8795	.8941
5	-15.440	3.340	-36.424	-21.482	.2114	1367.3	.7704	928.65	32.490	672.570	2.556	.351	.8710	.8867
6	-15.328	3.599	-37.229	-21.361	.2169	1374.3	.7584	927.47	32.477	674.151	2.557	.354	.8628	.8795
7	-17.169	3.860	-37.451	-20.282	.2298	1381.5	.7547	924.60	32.388	675.778	2.558	.359	.8525	.8704
8	-17.956	4.037	-37.545	-19.569	.2463	1388.9	.7560	916.33	32.121	677.460	2.560	.366	.8372	.8569
9	-18.663	4.303	-37.622	-18.939	.2653	1396.6	.7484	903.21	31.868	679.202	2.561	.373	.8224	.8440
10	-19.353	4.479	-37.649	-18.295	.2890	1404.4	.7355	895.20	31.438	681.013	2.561	.382	.8030	.8269
11	-19.962	4.629	-37.630	-17.647	.3344	1412.7	.7025	860.87	30.450	682.927	2.566	.397	.7694	.7972
12	-20.557	4.755	-37.777	-17.150	.3764	1421.5	.6583	823.61	29.491	684.388	2.551	.413	.7374	.7690
13	-21.176	4.553	-38.023	-15.847	.4090	1431.1	.6395	792.05	28.730	687.216	2.546	.428	.7109	.7456
14	-21.755	4.925	-38.469	-16.714	.4341	1441.3	.6161	766.45	28.142	689.516	2.542	.440	.6889	.7261
15	-22.316	4.900	-39.108	-15.791	.4578	1452.3	.5917	739.40	27.572	692.203	2.538	.453	.6676	.7072
16	-22.361	4.939	-38.262	-15.401	.4875	1464.0	.5547	697.33	26.810	695.002	2.584	.478	.6466	.6893
17	-23.377	4.837	-37.237	-13.860	.5180	1476.7	.5100	645.31	26.013	698.364	2.646	.508	.6265	.6726
18	-23.859	4.630	-37.035	-13.177	.5383	1490.5	.4763	606.01	25.530	701.429	2.695	.531	.6120	.6606
19	-24.286	4.333	-37.610	-13.324	.5492	1505.4	.4357	582.29	25.339	705.085	2.731	.547	.6020	.6524
20	-24.647	3.931	-38.772	-14.125	.5625	1521.5	.4267	543.08	25.104	709.375	2.772	.567	.5912	.6436
21	-24.904	3.617	-41.515	-16.551	.5820	1539.8	.3778	488.63	24.741	713.553	2.824	.592	.5782	.6330

STATION 9 INTEGRATED PERFORMANCE PRESSURE RATIO = 2.598 ISEN. EFF.= .724 POLY. EFF.= .757 DELTA T ON T = .431

STATION 10 FLOW FIELD DESCRIPTION

STREAM-LINE	RADIUS	VELOCITIES MERID	VELOCITIES TANGEN	VELOCITIES TOTAL	TEMPERATURES TOTAL	TEMPERATURES STATIC	PRESSURES TOTAL	PRESSURES STATIC	MACH NO	ANGLES WHIRL	ANGLES SLOPE	RADIUS OF CURVATURE	SPECIFIC WEIGHT
1	7.5746	750.63	784.22	1085.46	693.165	595.857	37.492	22.003	.9074	46.40	7.82	9.349	.0990
2	7.6126	753.92	793.05	1094.22	695.106	596.773	37.508	21.914	.9115	46.45	7.74	9.463	.0985
3	7.6513	757.31	797.68	1100.25	697.029	597.514	37.525	21.819	.9159	46.47	7.60	9.508	.0979
4	7.6904	762.01	802.02	1106.23	698.908	598.407	37.541	21.723	.9203	46.47	7.43	9.403	.0973
5	7.7300	766.24	806.06	1112.14	700.740	599.182	37.556	21.629	.9246	46.45	7.23	9.104	.0968
6	7.7699	770.25	809.88	1117.67	702.538	599.974	37.571	21.542	.9286	46.44	7.01	8.684	.0963
7	7.8101	772.04	816.01	1123.35	704.875	601.278	37.589	21.464	.9323	46.59	6.79	8.204	.0957
8	7.8507	769.35	827.32	1129.75	708.424	603.657	37.615	21.397	.9358	47.08	6.54	7.710	.0950
9	7.8921	766.05	838.47	1135.74	711.976	606.115	37.642	21.339	.9389	47.58	6.29	7.207	.0944
10	7.9344	757.45	854.15	1141.62	716.623	609.687	37.643	21.290	.9410	48.43	6.02	6.706	.0936
11	7.9734	731.77	884.45	1147.93	724.735	616.562	37.563	21.251	.9403	50.40	5.71	6.221	.0924
12	8.0249	702.65	915.17	1153.80	733.085	623.953	37.490	21.224	.9402	52.48	5.34	5.755	.0912
13	8.0743	675.30	941.34	1158.51	740.525	630.547	37.421	21.210	.9392	54.34	4.89	5.313	.0902
14	8.1266	649.96	963.20	1161.99	747.103	636.507	37.360	21.213	.9376	55.99	4.33	4.904	.0894
15	8.1815	620.94	985.23	1164.58	753.867	642.824	37.297	21.237	.9351	57.78	3.64	4.536	.0886
16	8.2407	590.45	1032.37	1189.32	766.801	651.072	37.977	21.293	.9490	60.23	2.76	4.214	.0877
17	8.3043	550.73	1087.51	1219.01	781.937	660.462	38.890	21.395	.9659	63.14	1.64	3.943	.0869
18	8.3739	511.76	1128.00	1238.66	793.960	668.585	39.611	21.553	.9755	65.60	.19	3.734	.0864
19	8.4505	477.32	1153.53	1248.43	802.653	675.408	40.134	21.769	.9783	67.52	-1.60	3.580	.0864
20	8.5367	430.25	1182.52	1258.35	812.044	683.456	40.732	22.043	.9804	70.01	-3.71	3.430	.0865
21	8.6399	358.95	1220.18	1271.63	825.539	693.578	41.506	22.378	.9837	73.61	-6.18	3.053	.0865

STATION 11 FLOW FIELD DESCRIPTION

STREAM -LINE	RADIUS	VELOCITIES MERID	VELOCITIES TANGEN	VELOCITIES TOTAL	TEMPERATURES TOTAL	TEMPERATURES STATIC	PRESSURES TOTAL	PRESSURES STATIC	MACH NO	ANGLES WHIRL	ANGLES SLOPE	RADIUS OF CURVATURE	SPECIFIC WEIGHT
1	7.6199	918.10	783.54	1206.99	693.165	573.447	37.492	19.231	1.0255	40.43	9.06	26.367	.0899
2	7.6657	938.13	787.56	1224.88	695.106	571.515	37.508	18.860	1.0422	40.01	8.97	36.376	.0884
3	7.7112	953.14	791.46	1238.92	697.029	570.33	37.525	18.580	1.0550	39.71	8.83	53.623	.0873
4	7.7557	962.69	795.27	1248.83	698.908	570.758	37.541	18.396	1.0636	39.55	8.67	91.129	.0864
5	7.7992	966.11	798.91	1255.18	700.740	571.291	37.556	18.294	1.0685	39.53	8.49	263.292	.0859
6	7.8423	969.95	802.44	1258.86	702.538	572.341	37.571	18.253	1.0706	39.60	8.33	-489.561	.0855
7	7.8843	968.14	808.33	1261.22	704.876	574.202	37.589	18.256	1.0709	39.86	8.19	-174.605	.0853
8	7.9265	961.93	819.42	1263.63	708.424	577.274	37.615	18.287	1.0701	40.43	8.09	-147.191	.0849
9	7.9689	954.60	830.40	1265.24	711.976	580.514	37.642	18.336	1.0685	41.02	8.02	-175.037	.0847
10	8.0114	943.02	845.96	1266.86	716.623	584.357	37.643	18.395	1.0659	41.89	7.96	-333.238	.0843
11	8.0547	918.90	870.38	1269.65	724.735	592.444	37.568	18.458	1.0616	43.63	7.89	2383.608	.0835
12	8.0993	892.50	906.77	1272.32	733.085	600.297	37.490	18.526	1.0568	45.45	7.76	247.578	.0828
13	8.1452	867.24	933.15	1273.92	740.525	607.459	37.421	18.601	1.0519	47.10	7.56	121.663	.0821
14	8.1924	843.17	955.46	1274.31	747.103	614.007	37.360	18.689	1.0467	48.57	7.26	73.543	.0816
15	8.2408	816.09	978.18	1273.91	753.867	620.912	37.297	18.796	1.0406	50.16	6.83	47.958	.0812
16	8.2910	787.93	1026.13	1293.77	766.301	629.763	37.977	18.938	1.0495	52.48	6.18	35.980	.0806
17	8.3437	750.90	1082.37	1317.34	781.937	639.982	38.890	19.147	1.0601	55.25	5.16	32.146	.0802
18	8.3997	708.59	1124.53	1329.16	793.920	649.512	39.611	19.762	1.0619	57.78	3.69	32.430	.0803
19	8.4605	659.21	1152.21	1327.46	802.653	658.707	40.134	19.929	1.0532	60.23	1.71	37.253	.0811
20	8.5301	582.43	1183.42	1318.98	812.644	670.544	40.732	20.619	1.0372	63.80	-.88	86.281	.0824
21	8.6199	450.53	1223.01	1303.35	825.539	667.038	41.506	21.631	1.0128	69.78	-4.27	-27.461	.0844

BLADE DATA

LOCAT -ION	BLADE-ANGLES SECTION	BLADE-ANGLES LEAN	REL FLOW ANGLE	DEVIATION INCIDENCE	LOSS COEFF	BLADE SPEED	RELATIVE MACH NO	RELATIVE VELOCITY	RELATIVE PRESSURE	RELATIVE TEMPERATURE	PRESSURE RATIO	DELTA T ON T	ISENTROPIC EFFICIENCY	POLYTROPIC EFFICIENCY
1	48.317	-39.941	40.479	-8.339	0.0000	0.0	1.0255	1206.99	37.492	693.165	2.551	.336	.9071	.9183
2	47.947	-37.417	40.013	-7.933	0.0000	0.0	1.0422	1224.88	37.508	695.106	2.552	.340	.8975	.9100
3	47.056	-34.641	39.736	-7.350	0.0000	0.0	1.0550	1238.92	37.525	697.029	2.553	.344	.8883	.9019
4	46.369	-31.685	39.554	-6.815	0.0000	0.0	1.0535	1248.83	37.541	698.908	2.554	.347	.8795	.8941
5	45.847	-28.612	39.530	-6.317	0.0000	0.0	1.0685	1255.18	37.556	700.740	2.556	.351	.8710	.8867
6	45.450	-25.470	39.501	-5.849	0.0000	0.0	1.0705	1258.86	37.571	702.538	2.557	.354	.8628	.8795
7	45.117	-22.320	39.860	-5.257	0.0000	0.0	1.0703	1261.22	37.589	704.876	2.558	.359	.8525	.8704
8	44.847	-19.205	40.426	-4.421	0.0000	0.0	1.0701	1263.63	37.615	708.424	2.560	.366	.8372	.8569
9	44.640	-16.041	41.020	-3.621	0.0000	0.0	1.0685	1265.24	37.642	711.976	2.561	.373	.8224	.8440
10	44.504	-12.649	41.894	-2.609	0.0000	0.0	1.0559	1266.86	37.643	716.623	2.561	.382	.8030	.8269
11	44.440	-8.847	43.632	-.809	0.0000	0.0	1.0615	1269.65	37.568	724.735	2.556	.397	.7694	.7972
12	44.479	-4.779	45.455	.975	0.0000	0.0	1.0568	1272.32	37.490	733.085	2.551	.413	.7374	.7690
13	44.665	-.834	47.097	2.432	0.0000	0.0	1.0519	1273.92	37.421	740.525	2.543	.428	.7109	.7456
14	45.003	2.743	48.573	3.569	0.0000	0.0	1.0467	1274.31	37.360	747.103	2.542	.440	.6889	.7261
15	45.402	6.623	50.162	4.760	0.0000	0.0	1.0405	1273.91	37.297	753.867	2.538	.453	.6676	.7072
16	45.741	11.862	52.479	6.738	0.0000	0.0	1.0495	1293.77	37.977	766.301	2.584	.478	.6466	.6893
17	46.085	16.803	55.249	9.104	0.0000	0.0	1.0601	1317.34	38.890	781.937	2.646	.508	.6265	.6726
18	46.711	20.776	57.784	11.073	0.0000	0.0	1.0619	1329.16	39.611	793.920	2.695	.531	.6120	.6606
19	47.812	34.473	60.225	12.413	0.0000	0.0	1.0532	1327.46	40.134	802.653	2.731	.547	.6028	.6524
20	49.158	41.320	63.796	14.633	0.0000	0.0	1.0372	1318.98	40.732	812.544	2.772	.567	.5912	.6436
21	50.814	46.652	69.777	18.963	0.0000	0.0	1.0128	1303.35	41.506	825.539	2.824	.592	.5782	.6330

STATION 11 INTEGRATED PERFORMANCE PRESSURE RATIO = 2.593 ISEN. EFF.= .724 POLY. EFF.= .757 DELTA T ON T = .431

STATION 12 FLOW FIELD DESCRIPTION

STREAM -LINE	RADIUS	VELOCITIES MERID	VELOCITIES TANGEN	VELOCITIES TOTAL	TEMPERATURES TOTAL	TEMPERATURES STATIC	PRESSURES TOTAL	PRESSURES STATIC	MACH NO	ANGLES WHIRL	ANGLES SLOPE	RADIUS OF CURVATURE	SPECIFIC WEIGHT
1	7.7150	962.51	620.48	1145.17	693.165	585.425	36.489	20.126	.9631	32.81	5.21	-3.688	.0922
2	7.7539	944.35	601.09	1119.43	695.106	592.177	36.500	20.754	.9361	32.48	4.87	-3.427	.0940
3	7.7930	925.70	580.58	1092.70	697.029	598.973	36.509	21.400	.9086	32.09	4.64	-3.216	.0958
4	7.8322	906.77	560.12	1065.82	698.908	605.543	36.510	22.038	.8814	31.70	4.21	-3.058	.0976
5	7.8716	887.67	541.39	1039.72	700.740	612.007	36.499	22.646	.8554	31.38	3.91	-2.954	.0992
6	7.9112	866.24	525.20	1014.75	702.538	618.032	36.462	23.205	.8308	31.17	3.66	-2.888	.1007
7	7.9512	850.15	512.30	992.62	704.876	624.035	36.425	23.703	.8088	31.08	3.48	-2.846	.1019
8	7.9917	834.80	501.80	974.01	708.424	630.508	36.396	24.142	.7896	31.01	3.37	-2.819	.1027
9	8.0327	821.51	492.44	957.83	711.976	636.749	36.376	24.529	.7727	30.94	3.34	-2.804	.1033
10	8.0744	810.23	484.49	944.03	716.623	643.568	36.354	24.872	.7576	30.88	3.37	-2.806	.1036
11	8.1169	800.25	478.28	932.23	724.735	653.525	36.276	25.175	.7423	30.86	3.42	-2.835	.1033
12	8.1604	791.20	473.91	922.23	733.085	663.435	36.206	25.443	.7291	30.92	3.47	-2.910	.1028
13	8.2046	783.93	471.70	914.94	740.525	672.015	36.192	25.677	.7188	31.04	3.51	-3.037	.1025
14	8.2493	777.45	470.74	908.85	747.103	679.532	36.187	25.877	.7101	31.19	3.52	-3.229	.1021
15	8.2951	772.54	471.07	904.84	753.867	686.927	36.183	26.036	.7032	31.37	3.48	-3.517	.1016
16	8.3405	790.15	456.83	928.11	766.801	696.430	36.772	26.148	.7164	31.64	3.34	-4.019	.1007
17	8.3861	814.82	513.64	961.56	781.937	706.473	37.541	26.196	.7371	32.07	2.99	-5.074	.0994
18	8.4312	835.21	535.57	992.17	793.920	713.533	38.162	26.143	.7568	32.67	2.36	-7.820	.0982
19	8.4765	853.36	561.10	1021.31	802.653	717.625	38.591	25.933	.7769	33.33	1.43	-22.731	.0969
20	8.5237	878.05	591.32	1059.37	812.644	721.210	39.031	25.544	.8039	33.96	.06	18.477	.0950
21	8.5730	910.92	627.40	1106.03	825.539	725.939	39.505	25.015	.8366	34.56	-2.03	5.947	.0924

BLADE DATA

LOCAT -ION	BLADE-ANGLES SECTION	BLADE-ANGLES LEAN	REL FLOW ANGLE	DEVIATION INCIDENCE	LOSS COEFF	BLADE SPEED	RELATIVE MACH NO	RELATIVE VELOCITY	RELATIVE PRESSURE	RELATIVE TEMPERATURE	PRESSURE RATIO	DELTA T ON T	ISENTROPIC EFFICIENCY	POLYTROPIC EFFICIENCY
1	31.969	-24.847	32.608	.843	.0543	0.0	.9631	1146.17	36.489	693.165	2.483	.336	.8773	.8918
2	31.615	-23.358	32.477	.862	.0540	0.0	.9361	1119.43	36.500	695.106	2.484	.340	.8679	.8835
3	31.218	-21.377	32.195	.877	.0536	0.0	.9086	1092.70	36.509	697.029	2.484	.344	.8588	.8755
4	30.809	-19.077	31.704	.895	.0538	0.0	.8814	1065.82	36.510	698.908	2.484	.347	.8498	.8676
5	30.462	-16.686	31.377	.913	.0549	0.0	.8554	1039.72	36.499	700.740	2.484	.351	.8409	.8597
6	30.236	-14.406	31.173	.937	.0574	0.0	.8308	1014.76	36.462	702.538	2.481	.354	.8316	.8514
7	30.119	-12.247	31.077	.959	.0602	0.0	.8088	992.62	36.425	704.876	2.479	.359	.8281	.8412
8	30.031	-10.122	31.010	.979	.0631	0.0	.7895	974.01	36.396	708.424	2.477	.366	.8039	.8269
9	29.942	-7.951	30.940	.998	.0655	0.0	.7727	957.80	36.376	711.976	2.475	.373	.7885	.8133
10	29.864	-5.740	30.378	1.015	.0670	0.0	.7575	944.03	36.354	715.523	2.474	.382	.7693	.7963
11	29.836	-3.543	30.365	1.028	.0675	0.0	.7425	932.29	36.276	724.735	2.468	.397	.7369	.7675
12	29.382	-1.408	30.921	1.039	.0577	0.0	.7291	922.28	36.206	733.185	2.464	.413	.7063	.7404
13	29.934	-.700	31.039	1.045	.0653	0.0	.7133	914.94	36.192	740.525	2.463	.424	.6821	.7183
14	30.147	3.157	31.194	1.047	.0628	0.0	.7101	908.86	36.187	747.103	2.462	.440	.6622	.7013
15	30.329	5.969	31.374	1.044	.0602	0.0	.7032	904.84	36.183	753.867	2.462	.453	.6430	.6842
16	30.602	9.211	31.641	1.039	.0633	0.0	.7164	928.11	36.772	766.301	2.502	.478	.6216	.6659
17	31.036	12.824	32.070	1.034	.0583	0.0	.7371	961.56	37.541	781.337	2.555	.508	.6087	.6482
18	31.536	16.735	32.669	1.033	.0719	0.0	.7568	992.17	38.162	793.320	2.597	.531	.5857	.6358
19	32.288	20.736	33.326	1.038	.0763	0.0	.7769	1021.31	38.591	802.653	2.626	.547	.5752	.6270
20	32.912	24.539	33.962	1.050	.0845	0.0	.8039	1059.37	39.031	812.644	2.656	.567	.5629	.6167
21	33.478	28.225	34.537	1.073	.1007	0.0	.8366	1106.08	39.505	825.539	2.688	.592	.5466	.6029

STATION 12 INTEGRATED PERFORMANCE PRESSURE RATIO = 2.512 ISEN. EFF.= .695 POLY. EFF.= .731 DELTA T ON T = .431

STATION 13 FLOW FIELD DESCRIPTION

STREAM -LINE	RADIUS	------VELOCITIES------- MERID	TANGEN	TOTAL	--TEMPERATURES-- TOTAL	STATIC	---PRESSURES--- TOTAL	STATIC	MACH NO	---ANGLES--- WHIRL	SLOPE	RADIUS OF CURVATURE	SPECIFIC WEIGHT
1	7.7230	839.72	266.13	880.83	693.165	629.487	35.522	25.288	.7147	17.58	-2.23	-5.196	.1077
2	7.7573	828.69	262.04	869.14	695.106	633.124	35.515	25.548	.7032	17.55	-2.34	-5.691	.1082
3	7.7924	818.33	258.61	858.22	697.029	636.603	35.505	25.785	.6925	17.54	-2.43	-6.299	.1086
4	7.8283	808.65	255.65	848.11	698.908	639.307	35.487	25.998	.6825	17.54	-2.50	-7.050	.1089
5	7.8651	799.73	252.84	838.82	700.740	643.033	35.459	26.184	.6734	17.55	-2.53	-7.983	.1092
6	7.9028	790.62	249.55	829.07	702.538	646.173	35.384	26.341	.6640	17.52	-2.52	-9.149	.1093
7	7.9416	782.98	246.25	820.79	704.876	649.533	35.303	26.468	.6557	17.46	-2.46	-10.614	.1093
8	7.9816	777.31	243.54	814.57	708.424	654.034	35.224	26.568	.6485	17.40	-2.34	-12.469	.1089
9	8.0227	773.03	241.90	809.93	711.976	658.203	35.159	26.645	.6429	17.38	-2.16	-14.848	.1086
10	8.0649	770.47	241.45	807.42	716.623	663.213	35.106	26.704	.6384	17.40	-1.94	-17.916	.1080
11	8.1084	768.80	241.52	805.84	724.735	671.561	35.016	26.749	.6333	17.44	-1.69	-21.847	.1068
12	8.1532	768.03	241.64	805.15	733.085	680.031	34.937	26.787	.6288	17.46	-1.40	-26.745	.1056
13	8.1992	770.92	242.73	808.22	740.525	687.092	34.956	26.820	.6280	17.47	-1.09	-32.381	.1047
14	8.2460	773.65	243.77	811.14	747.103	693.306	34.983	26.853	.6275	17.49	-.79	-37.920	.1039
15	8.2937	776.33	245.21	814.19	753.867	699.591	35.013	26.887	.6271	17.53	-.49	-42.300	.1030
16	8.3417	799.10	253.70	838.41	766.801	709.402	35.474	26.926	.6414	17.61	-.19	-45.807	.1018
17	8.3894	826.67	265.02	868.11	781.937	720.453	36.058	26.968	.6591	17.78	.12	-50.552	.1004
18	8.4368	847.65	275.97	891.64	793.920	729.115	36.547	27.012	.6730	18.03	.41	-60.560	.0993
19	8.4841	861.03	285.31	907.25	802.653	735.602	36.875	27.049	.6818	18.37	.66	-92.053	.0986
20	8.5316	875.65	297.06	924.86	812.644	743.015	37.212	27.063	.6916	18.77	.83	-633.076	.0977
21	8.5795	893.78	311.76	946.59	825.539	752.670	37.565	27.038	.7034	19.23	.88	76.314	.0963

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BLADE DATA

LOCAT -ION	BLADE-ANGLES SECTION	LEAN	REL FLOW ANGLE	DEVIATION INCIDENCE	LOSS COEFF	BLADE SPEED	RELATIVE MACH NO	RELATIVE VELOCITY	RELATIVE PRESSURE	RELATIVE TEMPERATURE	PRESSURE RATIO	DELTA T ON T	ISENTROPIC EFFICIENCY	POLYTROPIC EFFICIENCY
1	16.234	-9.414	17.585	1.351	.1073	0.0	.7147	880.89	35.522	693.165	2.417	.336	.8488	.8655
2	15.182	-8.916	17.548	1.366	.1069	0.0	.7032	869.14	35.515	695.106	2.417	.340	.8384	.8570
3	16.154	-8.350	17.534	1.383	.1066	0.0	.6925	858.22	35.505	697.029	2.416	.344	.8290	.8486
4	15.137	-7.707	17.544	1.407	.1073	0.0	.6825	848.11	35.487	698.908	2.415	.347	.8198	.8405
5	16.111	-6.973	17.540	1.430	.1083	0.0	.6734	838.82	35.459	700.740	2.413	.351	.8107	.8324
6	15.048	-6.133	17.518	1.470	.1132	0.0	.6640	829.07	35.384	702.538	2.408	.354	.8006	.8233
7	15.952	-5.204	17.458	1.507	.1182	0.0	.6557	820.79	35.303	704.876	2.402	.359	.7882	.8122
8	15.854	-4.223	17.397	1.543	.1237	0.0	.6485	814.57	35.224	708.424	2.397	.366	.7711	.7970
9	15.800	-3.239	17.376	1.577	.1285	0.0	.6429	809.99	35.159	711.376	2.392	.373	.7550	.7827
10	15.793	-2.302	17.401	1.607	.1313	0.0	.6384	807.42	35.106	716.623	2.389	.382	.7358	.7656
11	15.807	-1.459	17.440	1.633	.1335	0.0	.6333	805.84	35.016	724.735	2.383	.397	.7043	.7375
12	15.811	-.756	17.465	1.654	.1345	0.0	.6288	805.15	34.937	733.085	2.377	.413	.6747	.7111
13	15.807	-.151	17.475	1.668	.1310	0.0	.6280	808.22	34.956	740.525	2.379	.428	.6524	.6912
14	15.815	.487	17.489	1.674	.1273	0.0	.6275	811.14	34.983	747.103	2.380	.440	.6342	.6749
15	15.857	1.284	17.528	1.671	.1234	0.0	.6271	814.19	35.013	753.867	2.383	.453	.6165	.6592
16	15.952	2.233	17.614	1.662	.1315	0.0	.6414	838.41	35.474	766.801	2.414	.478	.5941	.6398
17	16.123	3.277	17.775	1.652	.1434	0.0	.6591	868.11	36.058	781.337	2.454	.508	.5714	.6204
18	15.382	4.398	18.030	1.648	.1521	0.0	.6730	891.64	36.547	793.920	2.487	.531	.5556	.6870
19	16.717	5.633	18.369	1.652	.1613	0.0	.6818	907.25	36.875	802.553	2.509	.547	.5444	.5974
20	17.104	7.020	18.775	1.670	.1750	0.0	.6916	924.86	37.212	812.544	2.532	.567	.5316	.5865
21	17.510	8.542	19.229	1.719	.1983	0.0	.7034	946.59	37.565	825.539	2.556	.592	.5149	.5722

STATION 13 INTEGRATED PERFORMANCE PRESSURE RATIO = 2.424 ISEN. EFF.= .664 POLY. EFF.= .702 DELTA T ON T = .431

STATION 14 FLOW FIELD DESCRIPTION

STREAM -LINE	RADIUS	------VELOCITIES------ MERID	TANGEN	TOTAL	--TEMPERATURES-- TOTAL	STATIC	---PRESSURES--- TOTAL	STATIC	MACH NO	---ANGLES--- WHIRL	SLOPE	RADIUS OF CURVATURE	SPECIFIC WEIGHT
1	7.6720	740.75	80.24	745.08	593.165	647.630	34.551	27.186	.5961	6.18	-4.29	16.241	.1126
2	7.7090	741.32	79.69	745.51	595.106	649.524	34.513	27.167	.5956	6.07	-4.15	17.502	.1122
3	7.7483	741.81	77.59	745.85	597.029	651.409	34.472	27.148	.5950	5.97	-3.99	18.899	.1118
4	7.7877	742.09	75.44	746.01	598.908	653.274	34.427	27.127	.5943	5.88	-3.82	20.454	.1114
5	7.8274	742.10	75.44	745.92	700.740	655.122	34.376	27.106	.5934	5.80	-3.64	22.200	.1110
6	7.8689	739.29	74.29	743.01	702.538	657.281	34.262	27.085	.5901	5.74	-3.43	24.213	.1105
7	7.9110	736.41	73.22	740.05	704.876	659.987	34.142	27.064	.5866	5.68	-3.20	26.622	.1100
8	7.9542	733.39	72.25	737.44	708.424	663.859	34.019	27.044	.5828	5.62	-2.94	29.613	.1092
9	7.9986	732.03	71.51	735.52	711.975	667.655	33.913	27.025	.5797	5.58	-2.64	33.356	.1085
10	8.0441	731.94	71.04	735.39	716.023	672.330	33.837	27.008	.5776	5.54	-2.32	38.080	.1077
11	8.0917	732.43	70.75	735.83	724.735	680.405	33.742	26.994	.5746	5.52	-1.98	44.246	.1064
12	8.1367	733.59	70.61	736.98	733.085	688.547	33.662	26.983	.5720	5.50	-1.63	52.714	.1051
13	8.1876	740.75	71.15	744.15	740.525	695.239	33.726	26.976	.5749	5.49	-1.29	65.911	.1040
14	8.2372	747.51	71.74	750.94	747.103	701.007	33.796	26.974	.5778	5.48	-.98	89.816	.1032
15	8.2875	754.21	72.40	757.63	753.867	706.961	33.870	26.978	.5806	5.49	-.70	143.238	.1023
16	8.3379	776.30	74.91	779.91	766.801	717.146	34.216	26.987	.5934	5.51	-.43	301.557	.1009
17	8.3882	801.40	78.03	805.44	781.937	729.031	34.624	27.003	.6080	5.56	-.14	-1267.970	.0993
18	8.4387	822.35	81.36	826.35	793.920	738.278	34.979	27.023	.6199	5.65	.17	-1299.801	.0982
19	8.4885	834.70	84.73	838.99	802.653	745.335	35.195	27.048	.6265	5.80	.48	-599.522	.0973
20	8.5391	847.20	89.31	851.90	812.644	753.593	35.407	27.075	.6327	6.02	.78	-514.572	.0963
21	8.5900	861.18	95.48	866.40	825.539	764.515	35.625	27.103	.6390	6.33	1.06	-510.607	.0951

BLADE DATA

LOCAT -ION	BLADE-ANGLES SECTION	LEAN	REL FLOW ANGLE	DEVIATION INCIDENCE	LOSS COEFF	BLADE SPEED	RELATIVE MACH NO	RELATIVE VELOCITY	RELATIVE PRESSURE	RELATIVE TEMPERATURE	PRESSURE RATIO	DELTA T ON T	ISENTROPIC EFFICIENCY	POLYTROPIC EFFICIENCY
1	3.965	-1.034	6.142	2.217	.1611	0.0	.5961	745.08	34.551	693.165	2.351	.336	.8180	.8383
2	3.834	-.995	6.074	2.241	.1605	0.0	.5956	745.51	34.513	695.106	2.348	.340	.8078	.8292
3	3.702	-.922	5.971	2.269	.1611	0.0	.5950	745.85	34.472	697.029	2.346	.344	.7978	.8202
4	3.575	-.839	5.981	2.306	.1625	0.0	.5943	746.01	34.427	698.908	2.343	.347	.7881	.8116
5	3.454	-.751	5.804	2.351	.1651	0.0	.5934	745.92	34.376	700.740	2.339	.351	.7786	.8031
6	3.335	-.665	5.738	2.403	.1713	0.0	.5901	743.01	34.262	702.538	2.331	.354	.7676	.7931
7	3.218	-.587	5.678	2.460	.1783	0.0	.5865	740.05	34.142	704.876	2.323	.359	.7543	.7812
8	3.105	-.519	5.625	2.520	.1861	0.0	.5828	737.44	34.019	708.424	2.315	.366	.7366	.7653
9	3.000	-.460	5.580	2.579	.1931	0.0	.5797	735.52	33.913	711.376	2.308	.373	.7200	.7503
10	2.909	-.409	5.544	2.635	.1977	0.0	.5775	735.38	33.837	716.023	2.302	.382	.7009	.7332
11	2.835	-.354	5.517	2.682	.2002	0.0	.5746	735.89	33.742	724.735	2.296	.397	.6706	.7060
12	2.781	-.280	5.498	2.713	.2018	0.0	.5720	736.98	33.562	733.085	2.291	.413	.6423	.6805
13	2.749	-.194	5.487	2.737	.1964	0.0	.5749	744.16	33.726	740.525	2.295	.428	.6222	.6626
14	2.744	-.139	5.482	2.736	.1909	0.0	.5778	750.94	33.796	747.103	2.300	.440	.6058	.6481
15	2.769	-.165	5.482	2.719	.1852	0.0	.5805	757.68	33.870	753.867	2.305	.453	.5900	.6340
16	2.820	-.274	5.511	2.691	.1975	0.0	.5934	779.91	34.216	765.301	2.328	.478	.5667	.6136
17	2.893	-.449	5.561	2.668	.2161	0.0	.6080	805.44	34.624	781.337	2.356	.508	.5423	.5923
18	2.989	-.656	5.650	2.661	.2299	0.0	.6199	825.36	34.979	793.920	2.380	.531	.5255	.5778
19	3.120	-.843	5.796	2.676	.2444	0.0	.6265	838.99	35.195	802.653	2.395	.547	.5132	.5671
20	3.296	-.979	6.015	2.722	.2548	0.0	.6327	851.90	35.407	812.644	2.409	.567	.4995	.5551
21	3.508	-1.035	6.326	2.818	.2453	0.0	.6390	866.46	35.625	825.539	2.424	.592	.4820	.5399

STATION 14 INTEGRATED PERFORMANCE PRESSURE RATIO = 2.336 ISEN. EFF.= .633 POLY. EFF.= .673 DELTA T ON T = .431

STATION 15 FLOW FIELD DESCRIPTION

STREAM LINE	RADIUS	VELOCITIES MERID	VELOCITIES TANGEN	VELOCITIES TOTAL	TEMPERATURES TOTAL	TEMPERATURES STATIC	PRESSURES TOTAL	PRESSURES STATIC	MACH NO	ANGLES WHIRL	ANGLES SLOPE	RADIUS OF CURVATURE	SPECIFIC WEIGHT
1	7.5400	703.65	0.00	703.65	693.165	652.553	33.583	27.140	.5608	0.00	-1.66	10.624	.1118
2	7.6730	703.82	0.00	703.82	695.106	654.485	33.512	27.096	.5602	0.00	-1.66	10.863	.1110
3	7.7190	703.87	0.00	703.87	697.029	656.406	33.439	27.053	.5594	0.00	-1.65	11.164	.1105
4	7.7593	703.77	0.00	703.77	698.908	658.301	33.364	27.010	.5585	0.00	-1.63	11.542	.1100
5	7.8016	703.51	0.00	703.51	700.740	660.163	33.288	26.968	.5575	0.00	-1.59	12.012	.1095
6	7.8445	699.22	0.00	699.22	702.538	662.464	33.132	26.927	.5532	0.00	-1.54	12.627	.1099
7	7.8880	694.71	0.00	694.71	704.876	665.324	32.970	26.888	.5485	0.00	-1.46	13.471	.1084
8	7.9340	690.27	0.00	690.27	708.424	669.385	32.802	26.851	.5433	0.00	-1.37	14.654	.1876
9	7.9800	686.83	0.00	686.83	711.976	673.334	32.661	26.817	.5391	0.00	-1.25	16.346	.1068
10	8.0285	686.14	0.00	686.14	716.623	678.070	32.568	26.787	.5367	0.00	-1.12	18.778	.1059
11	8.0772	686.66	0.00	686.66	724.735	686.145	32.472	26.760	.5339	0.00	-.97	22.341	.1046
12	8.1279	687.85	0.00	687.86	733.085	694.380	32.394	26.738	.5318	0.00	-.81	27.845	.1033
13	8.1791	698.09	0.00	698.09	740.525	700.680	32.498	26.720	.5373	0.00	-.66	36.411	.1023
14	8.2306	707.64	0.00	707.64	747.103	706.177	32.603	26.707	.5425	0.00	-.52	49.844	.1014
15	8.2826	717.12	0.00	717.12	753.867	711.856	32.709	26.697	.5476	0.00	-.39	72.748	.1006
16	8.3349	734.85	0.00	734.86	766.801	722.725	32.923	26.690	.5570	0.00	-.26	131.248	.0990
17	8.3871	753.32	0.00	753.42	781.937	735.668	33.138	26.688	.5661	0.00	-.12	1757.903	.0973
18	8.4397	769.90	0.00	769.90	793.920	745.635	33.354	26.690	.5748	0.00	.04	-140.525	.0960
19	8.4926	779.23	0.00	779.23	802.653	753.225	33.465	26.697	.5788	0.00	.20	-67.498	.0950
20	8.5460	788.75	0.00	788.75	812.644	762.042	33.574	26.710	.5826	0.00	.36	-44.829	.0940
21	8.6000	799.35	0.00	799.36	825.539	773.620	33.685	26.728	.5861	0.00	.52	-33.985	.0926

BLADE DATA

LOCAT -ION	BLADE-ANGLES SECTION	BLADE-ANGLES LEAN	REL FLOW ANGLE	DEVIATION INCIDENCE	LOSS COEFF	BLADE SPEED	RELATIVE MACH NO	RELATIVE VELOCITY	RELATIVE PRESSURE	RELATIVE TEMPERATURE	PRESSURE RATIO	DELTA T ON T	ISENTROPIC EFFICIENCY	POLYTROPIC EFFICIENCY
1	-7.239	.020	0.000	7.239	.2141	0.0	.5608	703.65	33.583	693.165	2.235	.336	.7875	.8104
2	-7.393	.020	0.000	7.393	.2143	0.0	.5602	703.82	33.512	695.106	2.280	.340	.7766	.8006
3	-7.556	.019	0.000	7.556	.2157	0.0	.5594	703.87	33.439	697.029	2.275	.344	.7659	.7910
4	-7.723	.018	0.000	7.723	.2182	0.0	.5585	703.77	33.364	698.908	2.270	.347	.7556	.7817
5	-7.891	.016	0.000	7.891	.2216	0.0	.5575	703.51	33.288	700.740	2.265	.351	.7456	.7727
6	-8.057	.014	0.000	8.057	.2298	0.0	.5532	699.22	33.132	702.538	2.254	.354	.7335	.7617
7	-8.223	.012	0.000	8.223	.2383	0.0	.5485	694.71	32.970	704.876	2.243	.359	.7193	.7489
8	-8.385	.010	0.000	8.385	.2490	0.0	.5433	690.27	32.802	708.424	2.232	.366	.7089	.7321
9	-8.539	.008	0.000	8.539	.2580	0.0	.5391	686.83	32.661	711.376	2.222	.373	.6838	.7166
10	-8.680	.007	0.000	8.680	.2637	0.0	.5367	685.14	32.568	715.523	2.216	.382	.6650	.6996
11	-8.805	.005	0.000	8.805	.2665	0.0	.5339	686.66	32.472	724.735	2.210	.397	.6360	.6734
12	-8.911	.003	0.000	8.911	.2687	0.0	.5318	687.86	32.394	733.085	2.204	.413	.6098	.6490
13	-8.993	.001	0.000	8.993	.2610	0.0	.5373	698.09	32.498	740.525	2.211	.428	.5911	.6330
14	-9.046	-.002	0.000	9.046	.2548	0.0	.5425	707.64	32.603	747.103	2.218	.440	.5766	.6201
15	-9.063	-.004	0.000	9.063	.2489	0.0	.5475	717.12	32.709	753.367	2.226	.453	.5625	.6075
16	-9.058	-.008	0.000	9.058	.2654	0.0	.5570	734.86	32.923	766.301	2.240	.478	.5378	.5856
17	-9.061	-.012	0.000	9.061	.2913	0.0	.5661	753.32	33.138	781.337	2.255	.504	.5112	.5620
18	-9.087	-.018	0.000	9.087	.3105	0.0	.5748	769.90	33.354	793.920	2.270	.531	.4932	.5461
19	-9.128	-.025	0.000	9.128	.3301	0.0	.5788	779.23	33.465	802.653	2.277	.547	.4888	.5344
20	-9.170	-.031	0.000	9.170	.3559	0.0	.5825	788.75	33.574	812.544	2.285	.567	.4656	.5216
21	-9.213	-.038	0.000	9.213	.3935	0.0	.5861	799.36	33.685	825.539	2.292	.592	.4478	.5057

STATION 15 INTEGRATED PERFORMANCE PRESSURE RATIO = 2.247 ISEN. EFF. = .600 POLY. EFF. = .642 DELTA T ON T = .431

STATION 16 FLOW FIELD DESCRIPTION

STREAM -LINE	RADIUS	------VELOCITIES------- MERID	TANGEN	TOTAL	--TEMPERATURES-- TOTAL	STATIC	---PRESSURES--- TOTAL	STATIC	MACH NO	---ANGLES--- WHIRL	SLOPE	RADIUS OF CURVATURE	SPECIFIC WEIGHT
1	7.6400	726.23	0.00	726.23	693.165	649.908	33.583	26.753	.5800	0.00	0.00	0.000	.1104
2	7.6733	723.98	0.00	723.98	695.106	652.122	33.512	26.753	.5772	0.00	-.03	1166.185	.1100
3	7.7177	721.62	0.00	721.62	697.029	654.323	33.439	26.752	.5744	0.00	-.05	619.046	.1096
4	7.7531	719.13	0.00	719.13	698.908	656.507	33.364	26.751	.5715	0.00	-.08	440.838	.1093
5	7.7994	716.51	0.00	716.51	700.740	658.653	33.288	26.750	.5685	0.00	-.10	355.626	.1089
6	7.8419	710.00	0.00	710.00	702.538	661.218	33.132	26.749	.5622	0.00	-.11	307.827	.1085
7	7.8858	703.34	0.00	703.34	704.876	664.335	32.970	26.747	.5557	0.00	-.12	279.350	.1080
8	7.9310	696.85	0.00	696.85	708.424	668.636	32.802	26.745	.5488	0.00	-.13	263.087	.1073
9	7.9775	691.49	0.00	691.49	711.976	672.808	32.661	26.743	.5429	0.00	-.13	255.860	.1066
10	8.0254	689.04	0.00	689.04	716.623	677.743	32.568	26.741	.5391	0.00	-.13	256.414	.1058
11	8.0746	688.03	0.00	688.03	724.735	685.391	32.472	26.739	.5351	0.00	-.13	264.544	.1045
12	8.1251	687.93	0.00	687.93	733.085	694.372	32.394	26.737	.5318	0.00	-.12	281.058	.1033
13	8.1765	697.12	0.00	697.12	740.525	700.790	32.498	26.735	.5365	0.00	-.11	307.688	.1023
14	8.2283	705.91	0.00	705.91	747.103	706.377	32.603	26.733	.5411	0.00	-.10	347.373	.1015
15	8.2806	714.85	0.00	714.85	753.867	712.122	32.709	26.732	.5458	0.00	-.09	406.070	.1007
16	8.3331	732.28	0.00	732.28	766.801	723.035	32.923	26.731	.5550	0.00	-.07	494.928	.0991
17	8.3859	750.66	0.00	750.66	781.937	735.395	33.138	26.730	.5640	0.00	-.06	636.803	.0974
18	8.4388	767.44	0.00	767.44	793.920	745.344	33.354	26.729	.5728	0.00	-.04	886.293	.0961
19	8.4921	777.28	0.00	777.28	802.653	753.473	33.465	26.728	.5773	0.00	-.03	1410.629	.0951
20	8.5458	787.61	0.00	787.61	812.644	762.188	33.574	26.728	.5817	0.00	-.01	3058.098	.0940
21	8.6000	799.35	0.00	799.36	825.539	773.620	33.685	26.728	.5861	0.00	0.00	0.000	.0926

STATION 17 FLOW FIELD DESCRIPTION

STREAM -LINE	RADIUS	------VELOCITIES------- MERID	TANGEN	TOTAL	--TEMPERATURES-- TOTAL	STATIC	---PRESSURES--- TOTAL	STATIC	MACH NO	---ANGLES--- WHIRL	SLOPE	RADIUS OF CURVATURE	SPECIFIC WEIGHT
1	7.6400	727.71	0.00	727.71	693.165	649.731	33.583	26.727	.5813	0.00	0.00	0.000	.1103
2	7.6733	725.45	0.00	725.46	695.106	651.945	33.512	26.727	.5785	0.00	-.00	0.000	.1099
3	7.7176	723.07	0.00	723.07	697.029	654.157	33.439	26.727	.5756	0.00	-.00	0.000	.1096
4	7.7530	720.54	0.00	720.54	698.908	656.341	33.364	26.727	.5727	0.00	-.00	0.000	.1092
5	7.7993	717.86	0.00	717.86	700.740	658.495	33.288	26.727	.5696	0.00	-.00	0.000	.1088
6	7.8418	711.27	0.00	711.27	702.538	661.070	33.132	26.727	.5633	0.00	-.00	0.000	.1084
7	7.8856	704.52	0.00	704.52	704.876	664.198	32.970	26.727	.5567	0.00	-.01	0.000	.1079
8	7.9303	697.93	0.00	697.93	708.424	668.512	32.802	26.728	.5497	0.00	-.01	0.000	.1072
9	7.9774	692.47	0.00	692.47	711.976	672.697	32.661	26.728	.5437	0.00	-.01	0.000	.1065
10	8.0252	689.90	0.00	689.90	716.623	677.646	32.568	26.728	.5398	0.00	-.01	0.000	.1058
11	8.0744	688.76	0.00	688.76	724.735	685.908	32.472	26.728	.5357	0.00	-.01	0.000	.1045
12	8.1249	688.55	0.00	688.55	733.085	694.303	32.394	26.728	.5323	0.00	-.01	0.000	.1032
13	8.1763	697.62	0.00	697.62	740.525	700.734	32.498	26.728	.5369	0.00	-.01	0.000	.1023
14	8.2281	706.29	0.00	706.29	747.103	706.333	32.603	26.728	.5414	0.00	-.01	0.000	.1015
15	8.2804	715.13	0.00	715.13	753.867	712.083	32.709	26.728	.5460	0.00	-.01	0.000	.1006
16	8.3330	732.47	0.00	732.47	766.801	723.012	32.923	26.728	.5551	0.00	-.01	0.000	.0991
17	8.3858	750.79	0.00	750.79	781.937	735.380	33.138	26.728	.5641	0.00	-.00	0.000	.0974
18	8.4387	767.51	0.00	767.51	793.920	745.936	33.354	26.728	.5729	0.00	-.00	0.000	.0961
19	8.4920	777.30	0.00	777.30	802.663	753.463	33.465	26.728	.5773	0.00	-.00	0.000	.0951
20	8.5457	787.61	0.00	787.61	812.644	762.187	33.574	26.728	.5817	0.00	-.00	0.000	.0940
21	8.6000	799.36	0.00	799.36	825.539	773.620	33.685	26.728	.5861	0.00	0.00	0.000	.0926

ROTOR PERFORMANCE

LOCAT -ION	INLET RADIUS	OUTLET RADIUS	INLET M. NO	INCID -ENCE	DEVIA -TION	LOSS COEFF	2-D D FACTOR	3-D D FACTOR	DELTA P ON Q	REL V RATIO	DELTA H/U**2	SECTION-ANGLES INLET	SECTION-ANGLES OUTLET	LEAN-ANGLES INLET	LEAN-ANGLES OUTLET
1	6.7500	7.5499	1.1331	10.150	23.521	.1703	.3615	.3695	.4801	.7561	.5897	-62.667	-11.816	17.285	2.399
2	6.8651	7.5855	1.1517	10.303	23.145	.1824	.3832	.3904	.4688	.7381	.5908	-62.598	-12.710	16.462	2.590
3	6.9795	7.6222	1.1703	10.492	22.618	.1933	.4028	.4093	.4566	.7220	.5915	-62.599	-13.622	15.461	2.814
4	7.0932	7.6598	1.1889	10.548	22.356	.2029	.4204	.4261	.4437	.7077	.5919	-62.663	-14.539	14.188	3.064
5	7.2062	7.6969	1.2073	10.661	21.481	.2114	.4361	.4410	.4302	.6951	.5919	-62.726	-15.446	12.889	3.338
6	7.3184	7.7361	1.2256	10.682	20.300	.2189	.4500	.4541	.4165	.6840	.5917	-62.760	-16.328	11.481	3.599
7	7.4300	7.7786	1.2438	10.746	20.280	.2298	.4649	.4683	.4024	.6720	.5930	-62.813	-17.169	10.328	3.860
8	7.5411	7.8203	1.2618	10.766	19.588	.2483	.4840	.4867	.3882	.6565	.5980	-62.916	-17.956	9.401	4.097
9	7.6517	7.8533	1.2796	10.772	18.938	.2653	.5015	.5036	.3739	.6425	.6026	-63.042	-18.683	8.578	4.303
10	7.7620	7.9077	1.2973	10.792	18.294	.2890	.5233	.5248	.3595	.6249	.6102	-63.165	-19.353	7.706	4.479
11	7.8721	7.9543	1.3148	10.826	17.640	.334	.5623	.5631	.3453	.5922	.6280	-63.286	-19.982	6.867	4.629
12	7.9822	8.0043	1.3322	10.865	17.149	.3704	.6015	.6017	.3316	.5592	.6454	-63.413	-20.587	6.168	4.753
13	8.0924	8.0579	1.3495	10.913	16.846	.4030	.6348	.6345	.3185	.5303	.6591	-63.543	-21.176	5.635	4.853
14	8.2029	8.1154	1.3667	10.932	15.714	.4341	.6525	.6616	.3060	.5073	.6692	-63.663	-21.755	5.237	4.926
15	8.3137	8.1768	1.3834	11.081	15.790	.4578	.6903	.6889	.2944	.4833	.6788	-63.768	-22.318	4.915	4.960
16	8.4252	8.2428	1.4009	11.207	15.401	.4875	.7312	.7293	.2838	.4503	.7050	-63.861	-22.861	4.571	4.939
17	8.5375	8.3144	1.4178	11.356	13.360	.5180	.7787	.7763	.2745	.4117	.7356	-63.952	-23.377	4.128	4.837
18	8.6507	8.3924	1.4347	11.511	13.176	.5380	.8144	.8116	.2669	.3820	.7551	-64.059	-23.859	3.595	4.630
19	8.7653	8.4763	1.4515	11.665	13.323	.5492	.8370	.8338	.2606	.3627	.7639	-64.197	-24.286	2.997	4.333
20	8.8816	8.5670	1.4683	11.841	14.125	.5626	.8561	.8625	.2558	.3374	.7744	-64.346	-24.647	2.389	3.981
21	9.0000	8.6699	1.4851	12.076	16.591	.5820	.9111	.9073	.2535	.2973	.7897	-64.476	-24.964	1.836	3.617

STATOR PERFORMANCE

LOCAT -ION	INLET RADIUS	OUTLET RADIUS	INLET M. NO	INCID -ENCE	DEVIA -TION	LOSS COEFF	2-D D FACTOR	3-D D FACTOR	DELTA P ON Q	REL V RATIO	DELTA H/U**2	SECTION-ANGLES INLET	SECTION-ANGLES OUTLET	LEAN-ANGLES INLET	LEAN-ANGLES OUTLET
1	7.6139	7.6400	1.0255	-8.339	7.239	.2141	.5521	.5519	.4331	.5833	0.0000	48.817	-7.239	-39.941	.020
2	7.6657	7.6790	1.0422	-7.933	7.393	.2143	.5548	.5647	.4417	.5745	0.0000	47.947	-7.393	-37.417	.020
3	7.7112	7.7190	1.0554	-7.350	7.556	.2157	.5761	.5760	.4472	.5681	0.0000	47.056	-7.556	-34.641	.019
4	7.7557	7.7598	1.0630	-6.815	7.723	.2182	.5857	.5856	.4499	.5635	0.0000	46.369	-7.723	-31.685	.018
5	7.7992	7.8016	1.0685	-6.317	7.891	.2216	.5937	.5937	.4503	.5605	0.0000	45.847	-7.891	-28.612	.016
6	7.8420	7.8445	1.0706	-5.849	8.057	.2298	.6036	.6036	.4490	.5554	0.0000	45.450	-8.057	-25.470	.014
7	7.8843	7.8886	1.0709	-5.257	8.223	.2383	.6134	.6133	.4465	.5503	0.0000	45.117	-8.223	-22.328	.012
8	7.9265	7.9340	1.0701	-4.421	8.385	.2490	.6238	.6237	.4431	.5463	0.0000	44.847	-8.385	-19.205	.010
9	7.9689	7.9806	1.0685	-3.621	8.559	.2580	.6328	.6327	.4393	.5423	0.0000	44.640	-8.539	-16.041	.008
10	8.0114	8.0285	1.0653	-2.609	8.680	.2637	.6401	.6400	.4360	.5415	0.0000	44.504	-8.680	-12.649	.007
11	8.0547	8.0776	1.0615	-.809	8.805	.2666	.6495	.6493	.4344	.5408	0.0000	44.440	-8.805	-8.447	.005
12	8.0993	8.1279	1.0563	.975	8.911	.2587	.6579	.6575	.4330	.5405	0.0000	44.479	-8.911	-4.779	.003
13	8.1462	8.1791	1.0513	2.432	8.993	.2616	.6572	.6567	.4314	.5403	0.0000	44.665	-8.993	-.834	.001
14	8.1924	8.2306	1.0457	3.569	9.046	.2548	.6549	.6544	.4294	.5553	0.0000	45.003	-9.046	2.743	-.002
15	8.2408	8.2826	1.0406	4.760	9.063	.2480	.6515	.6510	.4270	.5623	0.0000	45.402	-9.063	6.623	-.004
16	8.2910	8.3348	1.0495	6.738	9.058	.2554	.6516	.6510	.4072	.5680	0.0000	45.741	-9.058	11.862	-.008
17	8.3437	8.3871	1.0001	9.164	9.061	.2913	.6523	.6518	.3814	.5713	0.0000	46.085	-9.061	18.863	-.012
18	8.3997	8.4397	1.0019	11.073	9.087	.3105	.6466	.6461	.3587	.5792	0.0000	46.711	-9.087	26.776	-.018
19	8.4605	8.4926	1.0532	12.413	9.128	.3301	.6375	.6370	.3350	.5873	0.0000	47.812	-9.128	34.473	-.025
20	8.5301	8.5400	1.0372	14.638	9.170	.3559	.6238	.6236	.3028	.5980	0.0000	49.158	-9.170	41.320	-.031
21	8.6199	8.6000	1.0128	18.963	9.213	.3935	.6043	.6045	.2564	.6133	0.0000	50.814	-9.213	46.652	-.038

WAKE AND BOUNDARY LAYER BLOCKAGES (PERCENT)

STATION	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17
MID BLOCKAGE	0.0	0.0	0.0	1.0	1.0	1.5	2.0	2.0	1.9	0.0	7.0	9.4	11.8	15.0	16.6	17.8	17.9
DIST FACTOR	1.0	1.0	1.0	1.0	1.0	.5	.5	.2	0.0	.5	1.0	1.0	1.0	1.0	1.0	1.0	1.0
INT BLOCKAGE	0.0	0.0	0.0	1.0	1.0	1.5	2.0	2.0	1.9	0.0	7.0	9.4	11.8	15.0	16.6	17.8	17.9

SUMMARY POINT NO. 1 THE CALCULATION IS CONVERGED PASS 20

TEST POINT TITLE = 208300915800

FLOW = 20.76 SPEED = 20352.2 PRESSURE RATIO = 2.247 ISENTROPIC EFFY = .6004 POLYTROPIC EFFY = .6421 DEL T/T = .4306

APPENDIX B

COMPUTER INPUT DATA FOR DATA REDUCTION

Presented in this appendix is the computer input data used in conjunction with the programs of References 4 and 5 (as modified) to perform Phase I and II reduction of the experimental test data. Sections 1 through 4 of this appendix are listings of decks and subdecks which were relatively standard. The cards which were subject to change from test point to test point are indicated by an "*" in each section, and the changes to these cards are presented in Section 5 of this appendix as "exceptions" to the "common" or "standard" decks of Sections 1-4. Section 5 also presents a key for interpreting the information presented for each test point.

I. COMMON PHASE I DATA

```
   1    0  139
   1    1    1    1
  39    1
     460.        470.        480.        490.        492.        494.        496.        498.
     500.        502.        504.        506.        508.        510.        512.        514.
     516.        518.        520.        522.        524.        526.        528.        530.
     532.        534.        536.        538.        540.        542.        544.        546.
     548.        550.        552.        554.        556.        558.        560.
    .0185       .0309       .0505       .0806       .0855       .0961       .1041       .1126
    .1217       .1315       .1420       .1532       .1652       .1780       .1918       .2063
    .2219       .2384       .2561       .2749       .2949       .3162       .3386       .3628
    .3883       .4153       .4440       .4744       .5057       .5409       .5772       .6153
    .6555       .6980       .7429       .7902       .8403       .8930       .9487
    -2.0        -0.25        2.25       5.131
  12.687      29.5155
    .7217      .09969       .3701     .013917          1.          1.
  10    1
     470.        480.        490.        500.        510.        520.        530.        540.
     550.        560.
    9050.       5658.       3609.      2445.1      1704.9      1206.1       858.9       533.7
    468.4       350.8
   3
     494.        546.        561.
     .993          1.      1.001
   8    1
       .2          .4          .6          .8         1.2         1.4         1.6         1.8
    .3990       .9978       .9960       .9944       .9919       .9907       .9900       .9895
  14.696
   8    1
       1.         1.2         1.4         1.6         1.8         2.0         2.2         2.4
       0.        -.17        -.26        -.34        -.38       -.405        -.42       -.435
  16    1
423.5       447.5       462.5       477.5       492.5       507.5       522.5       537.5
552.5       565.8       579.3       593.8       508.5       523.3       539.3       656.0
410.        420.        430.        440.        450.        460.        470.        480.
490.        500.        510.        520.        530.        540.        550.        560.
   6
     0.25037954E-00      -0.80812820E-04      0.23122066E-06      -0.34160919E-09
     0.27497128E-12      -0.85548930E-16
   5
     0.43483286E-00       0.10980440E-03     -0.52292623E-06       0.10182121E-08
    -0.79236516E-12       0.22724483E-15
   4
   1   24
 101 103 105 107 109 111 113 115 117 119 121 123 125 127 129 131 133 135 137 139
 141 143 145 147
   2   24
 201 203 205 207 209 211 213 215 217 219 221 223 225 227 229 231 233 235 237 239
 241 243 245 247
   3   24
 301 303 305 307 309 311 313 315 317 319 321 323 325 327 329 331 333 335 337 339
 341 343 345 347
   4   24
 401 403 405 407 409 411 413 415 417 419 421 423 425 427 429 431 433 435 437 439
 441 443 445 447
   1
   1   40
```

Preceding page blank

```
 58  60  61  62  63  64  65  66  67  68  69  70  71  72  73  74  75  76  77  78
 79  80  81  82  83  84  85  86  87  88  89  90  91  92  93  94  57  96  97  98
  1   2   3   4   5   6   7   8   9  10  11  12  13  14  15  16  17  18  19  20
 21  22  23  24  25  26  27  28  29  30  31  32  33  34  35  36  37  38  39  40
 40   1
-.000672  -.000462  -.000252  -.0000352 .000188   .000408   .000628   .000848
.001072   .001298   .001528   .001752   .001982   .002212   .002442   .002672
.002902   .003132   .003368   .003593   .003828   .004062   .004292   .004522
.004752   .004978   .005208   .005428   .005658   .005878   .006098   .006318
.006542   .006768   .006988   .007205   .007428   .007648   .007878   .008098
     460.      470.      480.      490.      500.      510.      520.      530.
     540.      550.      560.      570.      580.      590.      600.      610.
     620.      630.      640.      650.      600.      670.      680.      690.
     700.      710.      720.      730.      740.      750.      760.      770.
     780.      790.      800.      810.      820.      830.      840.      850.
  1   5   0   5   5 139
  20371.4    7.0272      7.64      8.60
   1.4666    2.9228    4.4122    5.9684    7.3412
    7.871     8.001     8.121     8.251     8.371
    7.800     7.950     8.120     8.280     8.440
   14.696   518.038    53.342    85.775    778.12
  1   2
107 207
  2   4
  2   3   4   5
  3  10
327 323 319 315 311 329 325 321 317 313
  4  10
 14  12  10   8   6  15  13  11   9   7
  5  25
335 405 415 425 435 331 401 411 421 431 337 407 417 427 437 333 403 413 423 433
339 409 419 429 439
  5  25
 36  31  26  21  16  39  34  29  24  19  37  32  27  22  17  40  35  30  25  20
 38  33  28  23  18
  7   8
233 235 237 239 225 227 229 231
  8   4
105 103 205 203
  9   4
213 215 217 219
 10   9
     0.00      0.25      0.50      0.75      1.00      1.25      1.50      1.75
     2.00
113 115 117 119 121 123 125 127 129
 11   7
131 133 135 137 139 209 211
 12   3
305 307 309
 13   3
  1
143 145 147
  1
243 245 247
  1
343 345 347
  1
```

```
   443 445 447
    14   2
   223 221
    15   2
   109 111
    15   2
   101 201
    99  58
     1
     0   1   1
*  14.1155  15.      30.
   .05      .05      .05
     0
```

2. COMMON PHASE II FIXED (LOG I) DATA, ACROSS-BLADE

```
STAGE ARL 71-0061  ACROSS-THE-BLADE FIXED (LOG1) DATA
  10    21    60    20     0     0     7     9    30    49    50    2
   2
6.0586      -1.8
9.09        -1.8
   2
6.3746      -1.0
9.09        -1.0
   2
6.6016      -.4
9.05        -.4
   2
6.75        0.0
9.          0.0
   2
7.5499      2.0
8.6599      2.0
   6
7.5745      2.2
7.8         2.335
8.0         2.345
8.2         2.466
8.4         2.350
8.6399      2.2
   8
7.5199      2.5
7.7472      2.5993
7.8730      2.8402
8.0044      2.3262
8.1427      2.3491
8.2673      2.3995
8.4401      2.7650
8.6199      2.5
   2
7.64        4.725
8.6         4.725
   2
7.64        5.4
8.6         5.4
   2
7.64        7.0
8.6         7.0
   0
   0
   1    11      1
    6.5904   -52.9005   17.5413   .0134613    .2392       1   1
    6.9302   -52.7107   15.9341   .0132460    .2286       1   2
    7.1721   -62.8460   13.2208   .0131527    .2195       1   3
    7.4170   -52.3254   10.4439   .0129090    .2126       1   4
    7.6532   -63.1159    8.4818   .0127239    .2071       1   5
    7.9118   -63.3427    5.5942   .0125395    .2025       1   6
    8.1616   -63.6000    5.3723   .0124153    .1997       1   7
    8.4126   -63.8452    4.5131   .0122557    .1970       1   8
    8.6640   -64.1464    3.5276   .0122145    .1949       1   9
    8.9154   -64.5832    2.2176   .0121359    .1935       1  10
    9.1597   -65.1518    1.1399   .0117146    .1927       1  11
   4    11      1
```

	6.5355	9.5212	2.9435	.0603778	-.1057	6	1
	6.7392	5.2006	2.6542	.0529406	-.1075	6	2
	7.0419	.2129	2.4446	.0457537	-.1092	6	3
	7.2945	-5.3722	1.9066	.0393397	-.1106	6	4
	7.5471	-11.5237	2.3653	.0335472	-.1117	6	5
	7.8002	-17.3959	3.3970	.0283993	-.1136	6	6
	8.0542	-21.2991	4.5406	.0255993	-.1151	6	7
	8.3085	-23.9999	4.5433	.0235085	-.1188	5	8
	8.5626	-25.3089	3.9974	.0218739	-.1211	6	9
	8.8155	-25.9592	3.2905	.0204174	-.1229	6	10
	9.0703	-26.5701	3.4120	.0190405	-.1246	6	11
*	0	1					
*	1 10	1					
	7.5440	55.1561	-43.7538	.0161384	-.1083	1	1
	7.6595	53.5850	-37.7735	.0172298	-.0952	1	2
	7.7778	49.5335	-30.1445	.0157606	-.0847	1	3
	7.8985	47.1407	-21.2551	.0144515	-.0773	1	4
	8.0211	45.3735	-11.8297	.0139233	-.0727	1	5
	8.1454	44.4492	-.3198	.0135754	-.0710	1	6
	8.2714	44.5432	9.5089	.0133834	-.0722	1	7
	8.3997	45.8152	25.7782	.0133257	-.0770	1	8
	8.5330	49.5926	41.5555	.0137047	-.0882	1	9
	8.6721	54.4829	43.7546	.0112992	-.1047	1	10
*	3 16	1					
	7.5000	-6.7506	.1161	.0099432	.0001	5	1
	7.6250	-7.1356	.0202	.0097913	.0001	5	2
	7.7500	-7.6360	.0160	.0095448	.0001	5	3
	7.8750	-8.1755	.0121	.0095012	.0001	5	4
	8.0000	-8.6005	.0076	.0093536	.0000	5	5
	8.1250	-8.9062	.0039	.0092277	.0000	5	6
	8.2500	-9.0563	-.0026	.0090979	.0000	5	7
	8.3750	-9.0553	-.0113	.0089620	.0000	5	8
	8.5000	-9.1333	-.0255	.0088580	.0001	5	9
	8.6250	-9.2331	-.0415	.0087271	.0001	5	10
		1					
		1					

3. COMMON PHASE II LOG4 - PART I DATA, ACROSS - BLADE

```
           2       2     1
      0.0         0.
      1.0         1.
      0.0
      0.0         0.0
      1.0         1.0
           2       2     1
      0.          0.
      1.0          1.0
      0.
      0.0         0.0
      1.          1.
           1
*     2.          14.         5.0          1            0
```

4. COMMON PHASE II FIXED (LOG I) DATA, WITHIN-BLADE

```
STAGE ARL 71-0031    THRU-THE-BLADE FIXED (LOG1) DATA
  27     21    50    20    0    0    11    16    30    49          2
        2
8.0586       -1.8
9.09         -1.8
        2
8.3746       -1.0
9.09         -1.0
        2
8.6016       -.4
9.35         -.4
        2
8.75         0.0
9.00         0.0
        2
8.8979       .4
8.9340       .4
        2
7.0734       .5
8.8679       .5
        2
7.3120       1.2
8.8019       1.2
        2
7.4732       1.5
8.7359       1.5
        2
7.5499       2.0
8.6699       2.0
        6
7.5746       2.2
7.8          2.335
8.0          2.335
8.2          2.408
8.4          2.350
8.6399       2.2
        8
7.6159       2.5
7.7472       2.5998
7.8730       2.8402
8.0049       2.9262
8.1427       2.9491
8.2873       2.8996
8.4431       2.7556
8.6199       2.5
        8
7.7150       3.0559
7.8336       3.2061
7.9410       3.3114
8.0550       3.3759
8.1746       3.3931
8.2994       3.3550
8.4237       3.2554
8.5730       3.0575
        8
7.7230       3.5189
7.8456       3.7124
```

```
7.9538      3.7826
8.0586      3.8256
8.1885      3.8370
8.3126      3.8123
8.4397      3.7453
8.5795      3.5202
     3
7.6720      4.172
8.19        4.2610
8.59        4.1726
     2
7.64        4.725
8.6         4.725
     2
7.64        5.4
8.6         5.4
     2
7.54        7.0
8.6         7.0
     0
     0
     1    11       1
      6.6904    -62.3005    17.5413    .0134613    .2392     1   1
      6.9302    -62.7107    15.3341    .0132450    .2286     1   2
      7.1721    -62.8400    13.2208    .0131827    .2195     1   3
      7.4170    -62.9254    10.4499    .0129090    .2126     1   4
      7.6032    -63.1158     8.4318    .0127288    .2071     1   5
      7.9118    -63.3427     6.5942    .0125985    .2029     1   6
      8.1616    -63.6300     5.3723    .0124168    .1997     1   7
      8.4128    -63.8452     4.0131    .0122567    .1970     1   8
      8.6640    -64.1454     3.5278    .0122145    .1949     1   9
      8.9154    -64.6032     2.2178    .0121359    .1935     1  10
      9.1697    -65.0518     1.1399    .0117146    .1927     1  11
     2    11       1
      6.5550    -61.0901    10.8501    .1307074    .1296     2   1
      6.8010    -61.1445    10.7028    .1255196    .1226     2   2
      7.0475    -61.2028     9.5533    .1152806    .1161     2   3
      7.2949    -61.4277     6.8749    .1064776    .1110     2   4
      7.5438    -61.5295     4.6033    .0987088    .1078     2   5
      7.7933    -61.6597     3.4595    .0921858    .1055     2   6
      8.0434    -61.8771     2.3403    .0871034    .1039     2   7
      8.2938    -62.1529     1.7082    .0828221    .1028     2   8
      8.5444    -62.5158     1.7869    .0790653    .1019     2   9
      8.7948    -63.0514     1.7863    .0760741    .1010     2  10
      9.0454    -63.7269     1.2946    .0734003    .1002     2  11
     2    11       1
      6.5022    -58.5752     4.5983    .2034651    .0262     3   1
      6.7518    -58.3076     4.1918    .1852212    .0233     3   2
      7.0315    -57.3751     4.0286    .1582353    .0207     3   3
      7.2512    -55.7328     2.5350    .1525251    .0185     3   4
      7.5012    -56.6710      .1159    .1391285    .0177     3   5
      7.7513    -56.5937     -.3381    .1281453    .0180     3   6
      8.0014    -55.7320     -.7737    .1194649    .0184     3   7
      8.2515    -57.2269     -.7606    .1127583    .0189     3   8
      8.5015    -57.8358      .4758    .1070491    .0190     3   9
      8.7515    -58.6459     1.9678    .1021779    .0184     3  10
      9.0013    -59.5263     2.5503    .0978039    .0172     3  11
```

*	2 11	1					
	6.5147	-50.8918	-7.0526	.1953602	-.0672	4	1
	6.7633	-49.7516	-6.7049	.1765611	-.0627	4	2
	7.0120	-48.6054	-6.4278	.1592637	-.0586	4	3
	7.2609	-47.4533	-6.0408	.1433141	-.0547	4	4
	7.5099	-46.4385	-5.5164	.1288641	-.0513	4	5
	7.7591	-46.5407	-4.0948	.1177892	-.0485	4	6
	8.0088	-47.2809	-1.9706	.1091610	-.0468	4	7
	8.2588	-48.4517	-.6745	.1025181	-.0462	4	8
	8.5091	-49.6854	1.2656	.0971658	-.0462	4	9
	8.7598	-50.7961	2.3544	.0921054	-.0474	4	10
	9.0106	-51.6091	3.1763	.0870897	-.0489	4	11
*	2 11	1					
	6.5382	-10.5232	-5.2192	.1425048	-.1082	5	1
	6.7871	-15.8908	-5.7251	.1281731	-.1046	5	2
	7.0358	-20.7085	-6.0684	.1152004	-.1009	5	3
	7.2843	-25.0604	-6.7599	.1033309	-.0971	5	4
	7.5326	-28.5434	-5.8430	.0924283	-.0931	5	5
	7.7820	-31.3219	-2.4898	.0837072	-.0907	5	6
	8.0327	-33.9758	.4051	.0769924	-.0902	5	7
	8.2842	-36.1309	1.8634	.0717342	-.0909	5	8
	8.5362	-38.0143	2.9156	.0672640	-.0921	5	9
	8.7886	-39.0167	3.3575	.0627654	-.0938	5	10
	9.0411	-39.8357	3.0077	.0584652	-.0954	5	11
*	+ 11	1					
	6.5365	9.6212	2.9436	.0609778	-.1057	6	1
	6.7892	5.2006	2.5542	.0529406	-.1075	6	2
	7.0419	.2129	2.4446	.0457537	-.1092	6	3
	7.2945	-5.3722	1.9668	.0393897	-.1106	6	4
	7.5471	-11.5297	2.3853	.0338472	-.1117	6	5
	7.8002	-17.3989	3.9870	.0288993	-.1136	6	6
	8.0542	-21.2991	4.8468	.0255993	-.1161	6	7
	8.3065	-23.8399	4.8483	.0235085	-.1188	6	8
	8.5628	-25.3889	3.9974	.0218739	-.1211	6	9
	8.8165	-25.9892	3.2906	.0204174	-.1229	6	10
	9.0703	-26.5701	3.4120	.0190405	-.1246	6	11
	0	1					
	1 10						
	7.5440	55.1561	-43.7538	.0161384	-.1083	1	1
	7.6595	53.5860	-37.7735	.0172298	-.0952	1	2
	7.7778	49.8380	-30.1445	.0153608	-.0847	1	3
	7.8985	47.1407	-21.2581	.0144516	-.0773	1	4
	8.0211	45.3735	-11.8297	.0139233	-.0727	1	5
	8.1454	44.4992	-.3198	.0135764	-.0710	1	6
	8.2714	44.6432	9.6089	.0133834	-.0722	1	7
	8.3997	45.8152	26.7782	.0133257	-.0770	1	8
	8.5330	49.5328	41.5535	.0137047	-.0882	1	9
	8.6721	54.4829	48.7546	.0112992	-.1047	1	10
	2 10						
	7.5113	34.7293	-25.7556	.1185839	-.0549	2	1
	7.6334	33.9362	-26.3943	.1051109	-.0470	2	2
	7.7560	32.8982	-23.2637	.0920235	-.0394	2	3
	7.8795	31.3971	-16.2152	.0806230	-.0337	2	4
	8.0036	30.4237	-9.4354	.0734972	-.0301	2	5
	8.1283	29.8951	-2.9737	.0699181	-.0284	2	6
	8.2534	29.8235	3.3793	.0695095	-.0285	2	7
	8.3789	30.3733	12.2206	.0725976	-.0305	2	8

8.5053	32.4775	23.1254	.0807806	-.0353	2	9
8.6330	35.5323	32.5432	.0924539	-.0432	2	10
2 10						
7.5009	16.0561	-9.3376	.1261138	-.0156	3	1
7.6256	15.3379	-10.2994	.1115550	-.0127	3	2
7.7504	16.0640	-9.0207	.0976950	-.0096	3	3
7.8752	15.9233	-6.7565	.0859933	-.0076	3	4
8.0001	15.7355	-3.7730	.0783081	-.0061	3	5
8.1251	15.8033	-1.1758	.0743590	-.0055	3	6
8.2501	15.8516	.5496	.0735795	-.0054	3	7
8.3751	16.0597	2.3555	.0764080	-.0059	3	8
8.5002	16.7361	6.0348	.0832265	-.0070	3	9
8.6254	17.8003	10.0593	.0946591	-.0091	3	10
2 10						
7.5000	4.4731	-1.0973	.0835736	.0024	4	1
7.6250	4.1107	-1.1011	.0749591	.0027	4	2
7.7500	3.5330	-.9134	.0567219	.0030	4	3
7.8750	3.3067	-.6327	.0602250	.0032	4	4
8.0000	2.9363	-.4587	.0557055	.0034	4	5
8.1250	2.8012	-.3036	.0532538	.0035	4	6
8.2501	2.7567	-.1369	.0526989	.0035	4	7
8.3751	2.8770	-.3381	.0541945	.0036	4	8
8.5001	3.1370	-.6845	.0579050	.0037	4	9
8.6251	3.6112	-1.0323	.0646137	.0040	4	10
3 10	1					
7.5000	-6.7503	.0181	.0099432	.0001	5	1
7.6250	-7.1356	.0202	.0097913	.0001	5	2
7.7500	-7.6858	.0156	.0096448	.0001	5	3
7.8750	-8.1755	.0121	.0095012	.0001	5	4
8.0000	-8.5093	.0076	.0093536	.0000	5	5
8.1250	-8.9062	.0030	.0092277	.0000	5	6
8.2500	-9.0563	-.0026	.0090379	.0000	5	7
8.3750	-9.0533	-.0113	.0089620	.0000	5	8
8.5000	-9.1338	-.0235	.0088380	.0001	5	9
8.6250	-9.2331	-.0416	.0087271	.0001	5	10
	1					
	1					

APPENDIX B

5. INDIVIDUAL TEST INPUT DATA

a. Key

TEST IDENTIFICATION

(1) Exceptions to Common Phase I Data (Appendix B.1 cards indicated by "*").

(2) Exceptions to Common Phase II Fixed (LOG1) Data, Across-Blade (Appendix B.2, cards indicated by "*").

(3) Exceptions to Common Phase II LOG4 - Part 1 Data, Across-Blade (Appendix B.3, cards indicated by "*").

(4) Other LOG4 Data Required, Phase II Across-Blade

FOR TESTS CONSIDERED WITH WITHIN-BLADE ANALYSIS

(5) Exceptions to Common Phase II, Fixed (LOG1) Data, Within-Blade (Appendix B.4, cards indicated by "*").

(6) LOG4 Data Required, Phase II Within-Blade

(7) Stator Surface Static Pressures, obtained from Phase I Reduction.

b. Test Points

Test 208180514040

1. None
2. None
3. None
4. STATION BLOCKAGE DISTRIBUTION FACTOR

STATION	BLOCKAGE	DISTRIBUTION FACTOR
1	0.00000	1.0000
2	0.00000	1.0000
3	0.00000	1.0000
4	0.00000	1.0000
5	0.00000	1.0000
6	.05200	1.0000
7	0.00000	1.0000
8	.16300	1.0000
9	.05400	1.0000
10	.05400	1.0000

SOLUTION TYPE INDICATORS

STATION	1	2	3	4	5	6	7	8	9	10
NMACH	0	0	-0	-0	-0	-0	-0	-0	-0	-0

WITHIN-BLADE ONLY

5. None
6. ROTOR GENERALISED PERFORMANCE LOSS 2 POINTS DEVIATION 4 POINTS

M-COORD	LOSS COEFF/TOTAL LOSS COEFF
0.0000	0.0000
1.0000	1.0000

OUTLET RADIUS = 7.5493

M-COORD	DEVIATION ANGLE (DEGREES)
.2000	-1.4700
.4000	-2.[illegible]00
.6000	-2.9400
.8000	-5.0700

OUTLET RADIUS = 7.7254

M-COORD	DEVIATION ANGLE (DEGREES)
.2000	-1.2700
.4000	-1.7300
.6000	-2.5400
.8000	-4.3800

OUTLET RADIUS = 7.9180

M-COORD	DEVIATION ANGLE (DEGREES)
.2000	-1.1400
.4000	-1.5600
.6000	-2.2800
.8000	-3.9400

OUTLET RADIUS = 8.1291

M-COORD	DEVIATION ANGLE (DEGREES)
.2000	-1.1400
.4000	-1.5600
.6000	-2.2800
.8000	-3.9400

OUTLET RADIUS = 8.3362

M-COORD	DEVIATION ANGLE (DEGREES)
.2000	-1.3300
.4000	-1.8200
.6000	-2.6700
.8000	-4.6100

OUTLET RADIUS = 8.6539

M-COORD	DEVIATION ANGLE (DEGREES)
.2000	-1.9800
.4000	-2.7000
.6000	-3.9600
.8000	-6.8400

STATOR GENERALISED PERFORMANCE LOSS 2 POINTS DEVIATION 6 POINTS

M-COORD	LOSS COEFF/TOTAL LOSS COEFF
0.0000	0.0000
1.0000	1.0000

OUTLET RADIUS = 9.0000

M-COORD	DEVIATION ANGLE (DEGREES)
0.0000	.1000
.2000	.1100
.4000	.1500
.6000	.2200
.8000	.3800
1.0000	1.0000

NUMBER OF TEST POINTS TO BE ANALYSED = 1

PSCALE= .50 PLOWER= 14.00 DAMPF= 5.000 NSAVE= 1 NEX= 2

STATION	BLOCKAGE	DISTRIBUTION FACTOR
1	0.00000	1.0000
2	0.00000	1.0000
3	0.00000	1.0000
4	0.00000	1.0000
5	.05000	.5000
6	.05000	.5000
7	.05400	.2500
8	.05400	0.0000
9	.05400	1.0000
10	.05400	1.0000
11	.09000	1.0000
12	.09100	1.0000
13	.09200	1.0000
14	.09300	1.0000
15	.06000	1.0000
16	.08000	1.0000
17	.05400	1.0000

SOLUTION TYPE INDICATORS

STATION	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17
NMACH	0	0	-0	-0	-0	-0	-0	-0	-0	-0	-0	-0	0	-0	-0	-0	-0

7.

POSITION NO.	SS PRESSURE(PSIA)
1	13.184
2	12.347
3	13.36[illegible]
4	13.679
5	14.325
6	15.274
7	15.24[illegible]

	PS
1	[illegible]5.551
2	15.[illegible]2[illegible]
3	16.2[illegible]4

Test 208180106840

1. None
2. None
3. None
4. STATION BLOCKAGE DISTRIBUTION FACTOR

STATION	BLOCKAGE	DISTRIBUTION FACTOR
1	0.00000	1.0000
2	0.00000	1.0000
3	0.00000	1.0000
4	0.00000	1.0000
5	.02500	0.0000
6	.02500	0.0000
7	.05000	1.0000
8	.13600	1.0000
9	.05400	1.0000
10	.05400	1.0000

SOLUTION TYPE INDICATORS

STATION	1	2	3	4	5	6	7	8	9	10
NMACH	0	0	-0	-0	-0	-0	-0	-0	-0	-0

Test 208180315240

1. None
2. None
3. None
4. STATION BLOCKAGE DISTRIBUTION FACTOR

STATION	BLOCKAGE	DISTRIBUTION FACTOR
1	0.00000	1.0000
2	0.00000	1.0000
3	0.00000	1.0000
4	0.00000	1.0000
5	.02500	0.0000
6	.02500	0.0000
7	.05000	1.0000
8	.14300	1.0000
9	.05400	1.0000
10	.05400	1.0000

SOLUTION TYPE INDICATORS

STATION	1	2	3	4	5	6	7	8	9	10
NMACH	0	0	-0	-0	-0	-0	-0	-0	-0	-0

Test 208180415840

1. None
2. None
3. None
4.

STATION	BLOCKAGE	DISTRIBUTION FACTOR
1	0.00000	1.0000
2	0.00000	1.0000
3	0.00000	1.0000
4	0.00000	1.0000
5	.02500	0.0000
6	.02500	0.0000
7	.05000	1.0000
8	.15300	1.0000
9	.05400	1.0000
10	.05400	1.0000

SOLUTION TYPE INDICATORS

STATION	1	2	3	4	5	6	7	8	9	10
MACH	0	0	-0	-0	-0	-0	-0	-0	-0	-0

Test 2081806840

1. None
2. None
3. None
4.

STATION	BLOCKAGE	DISTRIBUTION FACTOR
1	0.00000	1.0000
2	0.00000	1.0000
3	0.00000	1.0000
4	0.00000	1.0000
5	.02500	0.0000
6	.02500	0.0000
7	.05000	1.0000
8	.20000	1.0000
9	.05400	1.0000
10	.05400	1.0000

SOLUTION TYPE INDICATORS

STATION	1	2	3	4	5	6	7	8	9	10
MACH	0	0	-0	-0	-0	-0	-0	-0	-0	-0

Test 208180612740

1. None
2. None
3. None
4. STATION BLOCKAGE DISTRIBUTION FACTOR

STATION	BLOCKAGE	DISTRIBUTION FACTOR
1	0.00000	1.0000
2	0.00000	1.0000
3	0.00000	1.0000
4	0.00000	1.0000
5	.02500	0.0000
6	.02500	1.0000
7	.05000	1.0000
8	.18500	1.0000
9	.05400	1.0000
10	.05400	1.0000

SOLUTION TYPE INDICATORS

STATION	1	2	3	4	5	6	7	8	9	10
MACH	0	0	-0	-0	-0	-0	-0	-0	-0	-0

Test 208180711240

1. None
2. None
3. None
4. STATION BLOCKAGE DISTRIBUTION FACTOR

STATION	BLOCKAGE	DISTRIBUTION FACTOR
1	0.00000	1.0000
2	0.00000	1.0000
3	0.00000	1.0000
4	0.00000	1.0000
5	.02500	0.0000
6	.02500	0.0000
7	.05000	1.0000
8	.16000	1.0000
9	.05400	1.0000
10	.05400	1.0000

SOLUTION TYPE INDICATORS

STATION	1	2	3	4	5	6	7	8	9	10
MACH	0	0	-0	-0	-0	-0	-0	-0	-0	-0

Test 208180901340

1. None
2. None
3. None
4. STATION BLOCKAGE DISTRIBUTION FACTOR

STATION	BLOCKAGE	DISTRIBUTION FACTOR
1	0.00000	1.0000
2	0.00000	1.0000
3	0.00000	1.0000
4	0.00000	1.0000
5	.02500	0.0000
6	.02500	0.0000
7	.05000	1.0000
8	.16000	1.0000
9	.05400	1.0000
10	.05400	1.0000

SOLUTION TYPE INDICATORS

STATION	1	2	3	4	5	6	7	8	9	10
NMACH	0	0	-0	-0	-0	-0	-0	-0	-0	-0

Test 208220415050

1. 14.0916 15.0 30.0
2. None
3. None
4. STATICN BLCCKAGE DISTRIBUTICN FACTOR

STATION	BLOCKAGE	DISTRIBUTION FACTOR
1	0.00000	1.0000
2	0.00000	1.0000
3	0.00000	1.0000
4	0.00000	1.0000
5	.02500	0.0000
6	.02500	0.0000
7	.05000	1.0000
8	.15300	1.0000
9	.05400	1.0000
10	.05400	1.0000

SCLUTICN TYPE INDICATORS

STATICN	1	2	3	4	5	6	7	8	9	10
NMACH	0	0	-0	-0	-0	-0	-0	-0	-0	-0

WITHIN-BLADE ONLY

5. None
6. ROTOR GENERALISED PERFORMANCE LOSS 2 POINTS DEVIATION 4 POINTS

M-COORD	LOSS COEFF/TOTAL LOSS COEFF
0.0000	0.0000
1.0000	1.0000

OUTLET RADIUS = 7.5499

M-COORD	DEVIATION ANGLE (DEGREES)
.2000	-1.4700
.4000	-2.0000
.6000	-2.9400
.8000	-5.0700

OUTLET RADIUS = 7.7254

M-COORD	DEVIATION ANGLE (DEGREES)
.2000	-1.2700
.4000	-1.7300
.6000	-2.5400
.8000	-4.3800

OUTLET RADIUS = 7.9130

M-COORD	DEVIATION ANGLE (DEGREES)
.2000	-1.1400
.4000	-1.5600
.6000	-2.2800
.8000	-3.9400

OUTLET RADIUS = 8.1291

M-COORD	DEVIATION ANGLE (DEGREES)
.2000	-1.1400
.4000	-1.5600
.6000	-2.2800
.8000	-3.9400

OUTLET RADIUS = 8.3552

M-COORD	DEVIATION ANGLE (DEGREES)
.2000	-1.3300
.4000	-1.8200
.6000	-2.6700
.8000	-4.6100

OUTLET RADIUS = 8.6699

M-COORD	DEVIATION ANGLE (DEGREES)
.2000	-1.9800
.4000	-2.7000
.6000	-3.9600
.8000	-6.8400

STATOR GENERALISED PERFORMANCE LOSS 2 POINTS DEVIATION 6 POINTS

M-COORD	LOSS COEFF/TOTAL LOSS COEFF
0.0000	0.0000
1.0000	1.0000

OUTLET RADIUS = 0.0000

M-COORD	DEVIATION ANGLE (DEGREES)
0.0000	.1000
.2000	.1100
.4000	.1500
.6000	.2200
.8000	.3800
1.0000	1.0000

NUMBER OF TEST POINTS TO BE ANALYSED = 1

PSCALE= .50 P_OWER= 14.00 DAMPF= 5.000 NSAVE= 1 NEX= 2

STATION	BLOCKAGE	DISTRIBUTION FACTOR
1	0.00000	1.0000
2	0.00000	1.0000
3	0.00000	1.0000
4	0.00000	1.0000
5	.05000	.5000
6	.05000	.5000
7	.05400	.3500
8	.05400	0.0000
9	.05400	1.0000
10	.05400	1.0000
11	.09000	1.0000
12	.09100	1.0000
13	.09200	1.0000
14	.09300	1.0000
15	.06000	1.0000
16	.08000	1.0000
17	.05400	1.0000

SOLUTION TYPE INDICATORS

STATION	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17
NMACH	0	0	-0	-0	-0	-0	-0	-0	-0	-0	-0	-0	0	-0	-0	-0	-0

7. POSITION NO.	SS PRESSURE(PSIA)
1	12.798
2	12.662
3	13.725
4	14.652
5	16.369
6	16.108
7	16.387

	PS
1	16.716
2	17.384
3	17.605

Test 208220215850

1. 14.0916 15. 30.
2. None
3. None
4. STATION BLOCKAGE DISTRIBUTION FACTOR

STATION	BLOCKAGE	DISTRIBUTION FACTOR
1	0.00000	1.0000
2	0.00000	1.0000
3	0.00000	1.0000
4	0.00000	1.0000
5	.02500	0.0000
6	.02500	0.0000
7	.05000	1.0000
8	.13600	1.0000
9	.05400	1.0000
10	.05400	1.0000

SOLUTION TYPE INDICATORS

STATION	1	2	3	4	5	6	7	8	9	10
NMACH	0	0	-0	-0	-0	-0	-0	-0	-0	-0

Test 208220315550

1. 14.0916 15. 30.
2. None
3. None
4. STATION BLOCKAGE DISTRIBUTION FACTOR

STATION	BLOCKAGE	DISTRIBUTION FACTOR
1	0.00000	1.0000
2	0.00000	1.0000
3	0.00000	1.0000
4	0.00000	1.0000
5	.02500	0.0000
6	.02500	0.0000
7	.05000	1.0000
8	.14300	1.0000
9	.05400	1.0000
10	.05400	1.0000

SOLUTION TYPE INDICATORS

STATION	1	2	3	4	5	6	7	8	9	10
NMACH	0	0	-0	-0	-0	-0	-0	-0	-0	-0

Test 208220514450

1. 14.0916 15. 30.
2. None
3. None
4. STATICN BLCCKAGE DISTRIBUTICN FACTOR

STATICN	BLCCKAGE	DISTRIBUTICN FACTOR
1	0.00000	1.0000
2	0.00000	1.0000
3	0.00000	1.0000
4	0.00000	1.0000
5	0.00000	0.0000
6	.05200	0.0000
7	0.00000	1.0000
8	.16300	1.0000
9	.05400	1.0000
10	.05400	1.0000

SCLUTION TYFE INDICATORS

STATICN	1	2	3	4	5	6	7	8	9	10
NMACH	0	0	-0	-0	-0	-0	-0	-0	-0	-0

Test 208220613650

1. 14.0916 15. 30.
2. None
3. None
4. STATICN BLCCKAGE DISTRIBUTICN FACTOR

STATICN	BLCCKAGE	DISTRIBUTICN FACTOR
1	0.00000	1.0000
2	0.00000	1.0000
3	0.00000	1.0000
4	0.00000	1.0000
5	.02500	0.0000
6	.02500	0.0000
7	.05000	1.0000
8	.18500	1.0000
9	.05400	1.0000
10	.05400	1.0000

SCLUTION TYFE INDICATORS

STATICN	1	2	3	4	5	6	7	8	9	10
NMACH	0	0	-0	-0	-0	-0	-0	-0	-0	-0

Test 208220712550

1. 14.0916   15.   30.
2. None
3. None
4. STATION BLOCKAGE DISTRIBUTION FACTOR

STATION	BLOCKAGE	DISTRIBUTION FACTOR
1	0.00000	1.0000
2	0.00000	1.0000
3	0.00000	1.0000
4	0.00000	1.0000
5	.02500	0.0000
6	.02500	0.0000
7	.05000	1.0000
8	.16000	1.0000
9	.05400	1.0000
10	.05400	1.0000

SOLUTION TYPE INDICATORS

STATION	1	2	3	4	5	6	7	8	9	10
NMACH	0	0	-0	-0	-0	-0	-0	-0	-0	-0

Test 208220810950

1. 14.0916   15.   30.
2. None
3. None
4. STATION BLOCKAGE DISTRIBUTION FACTOR

STATION	BLOCKAGE	DISTRIBUTION FACTOR
1	0.00000	1.0000
2	0.00000	1.0000
3	0.00000	1.0000
4	0.00000	1.0000
5	.02500	0.0000
6	.02500	0.0000
7	.05000	1.0000
8	.20000	1.0000
9	.05400	1.0000
10	.05400	1.0000

SOLUTION TYPE INDICATORS

STATION	1	2	3	4	5	6	7	8	9	10
NMACH	0	0	-0	-0	-0	-0	-0	-0	-0	-0

Test 208220907550

1. 14.0916 15. 30.
2. None
3. None
4. STATION BLOCKAGE DISTRIBUTION FACTOR

STATION	BLOCKAGE	DISTRIBUTION FACTOR
1	0.00000	1.0000
2	0.00000	1.0000
3	0.00000	1.0000
4	0.00000	1.0000
5	.02500	0.0000
6	.02500	0.0000
7	.05000	1.0000
8	.16000	1.0000
9	.05400	1.0000
10	.05400	1.0000

SOLUTION TYPE INDICATORS

STATION	1	2	3	4	5	6	7	8	9	10
NMACH	0	0	-0	-0	-0	-0	-0	-0	-0	-0

Test 208221315260

1. 14.0916 15.0 30.0
2. None
3. None
4. STATICN BLCCKAGE DISTRIBUTION FACTOR

1	0.00000	1.0000
2	0.00000	1.0000
3	0.00000	1.0000
4	0.00000	1.0000
5	.02500	0.0000
6	.02500	0.0000
7	.05000	1.0000
8	.15300	1.0000
9	.05400	1.0000
10	.05400	1.0000

SCLUTICN TYFE INCICATCRS

STATICN	1	2	3	4	5	6	7	8	9	10
NMACH	0	0	-0	-0	-0	-0	-0	-0	-0	-0

<u>WITHIN-BLADE ONLY</u>

5. None
6. ROTOR GENERALISED PERFORMANCE LOSS 2 POINTS DEVIATION 4 POINTS

M-COORD	LOSS COEFF/TOTAL LOSS COEFF
0.0000	0.0000
1.0000	1.0000

OUTLET RADIUS = 7.5499

M-COORD	DEVIATION ANGLE (DEGREES)
.2000	-1.4700
.4000	-2.0000
.6000	-2.9400
.8000	-5.0700

OUTLET RADIUS = 7.7254

M-COORD	DEVIATION ANGLE (DEGREES)
.2000	-1.2700
.4000	-1.7300
.6000	-2.5400
.8000	-4.3800

OUTLET RADIUS = 7.9180

M-COORD	DEVIATION ANGLE (DEGREES)
.2000	-1.1400
.4000	-1.5600
.6000	-2.2800
.8000	-3.9400

OUTLET RADIUS = 8.1291

M-COORD	DEVIATION ANGLE (DEGREES)
.2000	-1.1400
.4000	-1.5600
.6000	-2.2800
.8000	-3.9400

OUTLET RADIUS = 8.3562

M-COORD	DEVIATION ANGLE (DEGREES)
.2000	-1.3300
.4000	-1.8200
.6000	-2.5700
.8000	-4.6100

OUTLET RADIUS = 8.5699

M-COORD	DEVIATION ANGLE (DEGREES)
.2000	-1.9600
.4000	-2.7000
.6000	-3.9600
.8000	-6.8400

STATOR GENERALISED PERFORMANCE LOSS 2 POINTS DEVIATION 6 POINTS

M-COORD	LOSS COEFF/TOTAL LOSS COEFF
0.0000	0.0000
1.0000	1.0000

OUTLET RADIUS = 0.0000

M-COORD	DEVIATION ANGLE (DEGREES)
0.0000	.1000
.2000	.1100
.4000	.1500
.6000	.2200
.8000	.3800
1.0000	1.0000

```
NUMBER OF TEST POINTS TO BE ANALYSED =    1

PSCALE= 1.00 PLOWER= 14.00 DAMPF=  5.000 NSAVE= 1 NEX= 2

STATION  BLOCKAGE  DISTRIBUTION FACTOR

   1       0.00000          1.0000
   2       0.00000          1.0000
   3       0.00000          1.0000
   4       0.00000          1.0000
   5        .05000           .5000
   6        .05000           .5000
   7        .05400           .3500
   8        .05400          0.0000
   9        .05400          1.0000
  10        .05400          1.0000
  11        .06000          1.0000
  12        .07000          1.0000
  13        .08000          1.0000
  14        .09000          1.0000
  15        .05000          1.0000
  16        .06000          1.0000
  17        .05400          1.0000

SOLUTION TYPE INDICATORS

STATION   1  2  3  4  5  6  7  8  9 10 11 12 13 14 15 16 17
NMACH     0  0 -0 -0 -0 -0 -0 -0 -0 -0 -0 -0  0 -0 -0 -0 -0
```

7. POSITION NO.	SS PRESSURE(PSIA)
1	11.704
2	13.826
3	13.843
4	15.552
5	15.689
6	16.617
7	16.785

	PS
1	17.752
2	18.319
3	19.132

Test 208221215860

1. 14.0916 15. 30.
2. None
3. None
4. STATION BLOCKAGE DISTRIBUTION FACTOR

STATION	BLOCKAGE	DISTRIBUTION FACTOR
1	0.00000	1.0000
2	0.00000	1.0000
3	0.00000	1.0000
4	0.00000	1.0000
5	.02500	0.0000
6	.02500	0.0000
7	.05000	1.0000
8	.13600	1.0000
9	.05400	1.0000
10	.05400	1.0000

SOLUTION TYPE INDICATORS

STATION	1	2	3	4	5	6	7	8	9	10
NMACH	0	0	-0	-0	-0	-0	-0	-0	-0	-0

Test 208221315560

1. 14.0916 15. 30.
2. None
3. None
4. STATION BLOCKAGE DISTRIBUTION FACTOR

STATION	BLOCKAGE	DISTRIBUTION FACTOR
1	0.00000	1.0000
2	0.00000	1.0000
3	0.00000	1.0000
4	0.00000	1.0000
5	.02500	0.0000
6	.02500	0.0000
7	.05000	1.0000
8	.14300	1.0000
9	.05400	1.0000
10	.05400	1.0000

SOLUTION TYPE INDICATORS

STATION	1	2	3	4	5	6	7	8	9	10
NMACH	0	0	-0	-0	-0	-0	-0	-0	-0	-0

Test 208221514860

1. 14.0916 15. 30.
2. None
3. None
4. STATION BLOCKAGE DISTRIBUTION FACTOR

STATION	BLOCKAGE	DISTRIBUTION FACTOR
1	0.00000	1.0000
2	0.00000	1.0000
3	0.00000	1.0000
4	0.00000	1.0000
5	0.00000	0.0000
6	.05200	0.0000
7	0.00000	1.0000
8	.16300	1.0000
9	.05400	1.0000
10	.05400	1.0000

SOLUTION TYPE INDICATORS

STATION	1	2	3	4	5	6	7	8	9	10
NMACH	0	0	-0	-0	-0	-0	-0	-0	-0	-0

Test 208221614460

1. 14.0916 15. 30.
2. None
3. None
4. STATION BLOCKAGE DISTRIBUTION FACTOR

STATION	BLOCKAGE	DISTRIBUTION FACTOR
1	0.00000	1.0000
2	0.00000	1.0000
3	0.00000	1.0000
4	0.00000	1.0000
5	.02500	0.0000
6	.02500	0.0000
7	.05000	1.0000
8	.18500	1.0000
9	.05400	1.0000
10	.05400	1.0000

SOLUTION TYPE INDICATORS

STATION	1	2	3	4	5	6	7	8	9	10
NMACH	0	0	-0	-0	-0	-0	-0	-0	-0	-0

Test 208221713660

1. 14.0916 15. 30.
2. None
3. None
4. STATION BLOCKAGE DISTRIBUTION FACTOR

STATION	BLOCKAGE	DISTRIBUTION FACTOR
1	0.00000	1.0000
2	0.00000	1.0000
3	0.00000	1.0000
4	0.00000	1.0000
5	.02500	0.0000
6	.02500	0.0000
7	.05000	1.0000
8	.16000	1.0000
9	.05400	1.0000
10	.05400	1.0000

SOLUTION TYPE INDICATORS

STATION	1	2	3	4	5	6	7	8	9	10
NMACH	0	0	-0	-0	-0	-0	-0	-0	-0	-0

Test 208221812760

1. 14.0916 15. 30.
2. None
3. None
4. STATION BLOCKAGE DISTRIBUTION FACTOR

STATION	BLOCKAGE	DISTRIBUTION FACTOR
1	0.00000	1.0000
2	0.00000	1.0000
3	0.00000	1.0000
4	0.00000	1.0000
5	.02500	0.0000
6	.02500	0.0000
7	.05000	1.0000
8	.20000	1.0000
9	.05400	1.0000
10	.05400	1.0000

SOLUTION TYPE INDICATORS

STATION	1	2	3	4	5	6	7	8	9	10
NMACH	0	0	-0	-0	-0	-0	-0	-0	-0	-0

Test 208221911060

1. 14.0916 15. 30.
2. None
3. None
4. STATICN BLCCKAGE DISTRIBUTION FACTOR

STATION	BLOCKAGE	DISTRIBUTION FACTOR
1	0.00000	1.0000
2	0.00000	1.0000
3	0.00000	1.0000
4	0.00000	1.0000
5	.02500	0.0000
6	.02500	0.0000
7	.05000	1.0000
8	.16000	1.0000
9	.05400	1.0000
10	.05400	1.0000

SCLUTION TYPE INDICATORS

STATION	1	2	3	4	5	6	7	8	9	10
NMACH	0	0	-0	-0	-0	-0	-0	-0	-0	-0

Test 208240215670

1.	14.1586	15.0	30.0
2.	4	11	0
	0	0	0
	1	10	0
	3	10	0

3. None
4.

STATION	BLOCKAGE	DISTRIBUTION FACTOR
1	0.00000	1.0000
2	0.00000	1.0000
3	0.00000	1.0000
4	0.00000	1.0000
5	.02500	0.0000
6	.02500	0.0000
7	.05000	1.0000
8	.13200	1.0000
9	.35400	1.0000
10	.05400	1.0000

SOLUTION TYPE INDICATORS

STATION	1	2	3	4	5	6	7	8	9	10
NMACH	0	0	-0	-0	-0	-0	-0	-0	-0	-0

WITHIN-BLADE ONLY

5.	2	11	0
	2	11	0
	2	11	0
	2	11	0
	4	11	0

6. ROTOR GENERALISED PERFORMANCE LOSS 2 POINTS DEVIATION 4 POINTS

M-COORD	LOSS COEFF/TOTAL LOSS COEFF
0.0000	0.0000
1.0000	1.0000

OUTLET RADIUS = 7.5499

M-COORD	DEVIATION ANGLE (DEGREES)
.2000	-6.0000
.4000	-6.0000
.6000	-6.5000
.8000	-9.5000

```
OUTLET RADIUS =  7.9180

        M-COORD   DEVIATION ANGLE (DEGREES)

          .2000          -6.0000
          .4000          -6.0000
          .6000          -6.5000
          .8000          -8.5000

OUTLET RADIUS =  8.6699

        M-COORD   DEVIATION ANGLE (DEGREES)

          .2000          -6.0000
          .4000          -6.0000
          .6000          -6.7000
          .8000         -11.8000

STATOR GENERALISED PERFORMANCE   LOSS  2 POINTS  DEVIATION  6 POINTS

        M-COORD  LOSS COEFF/TOTAL LOSS COEFF

         0.0000           0.0000
         1.0000           1.0000

OUTLET RADIUS =  0.0000

        M-COORD   DEVIATION ANGLE (DEGREES)

         0.0000           .1000
          .2000           .1100
          .4000           .1500
          .6000           .2200
          .8000           .3800
         1.0000          1.0000

NUMBER OF TEST POINTS TO BE ANALYSED =   1

PSCALE= 1.50 P_OWER= 14.00 DAMPF=  5.000 NSAVE= 1  NLA · 2
```

STATION	BLOCKAGE	DISTRIBUTION FACTOR
1	0.00000	1.0000
2	0.00000	1.0000
3	0.00000	1.0000
4	.01000	1.0000
5	.01000	1.0000
6	.01500	.5000
7	.02000	.5000
8	.02500	.3500
9	.02500	.2000
10	.05500	1.0000
11	.03000	1.0000
12	.05000	1.0000
13	.07000	1.0000
14	.09000	1.0000
15	.06000	1.0000
16	.08000	1.0000
17	.05400	1.0000

SOLUTION TYPE INDICATORS

STATION	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17
NMACH	0	0	-0	-0	-0	-0	-0	-0	-0	-0	-0	-0	0	-0	-0	-0	-0

7.

POSITION NO.	SS PRESSURE(PSIA)
1	11.677
2	9.453
3	14.253
4	16.372
5	17.782
6	18.243
7	18.748

	PS
1	19.565
2	21.034
3	21.470

Test 208240315570

1. 14.1586 15. 30.
2.

4	11	0
0	0	0
1	10	0
3	10	0

3. None
4.

STATION	BLOCKAGE	DISTRIBUTION FACTOR
1	0.00000	1.0000
2	0.00000	1.0000
3	0.00000	1.0000
4	0.00000	1.0000
5	.02500	0.0000
6	.02500	0.0000
7	.05000	1.0000
8	.14300	1.0000
9	.05400	1.0000
10	.05400	1.0000

SOLUTION TYPE INDICATORS

STATION	1	2	3	4	5	6	7	8	9	10
NMACH	0	0	-0	-0	-0	-0	-0	-0	-0	-0

Test 208240415370

1. 14.1586 15. 30.
2.

4	11	0
0	0	0
1	10	0
3	10	0

3. None
4.

STATION	BLOCKAGE	DISTRIBUTION FACTOR
1	0.00000	1.0000
2	0.00000	1.0000
3	0.00000	1.0000
4	0.00000	1.0000
5	.02500	0.0000
6	.02500	0.0000
7	.05000	1.0000
8	.15300	1.0000
9	.05400	1.0000
10	.05400	1.0000

SOLUTION TYPE INDICATORS

STATION	1	2	3	4	5	6	7	8	9	10
NMACH	0	0	-0	-0	-0	-0	-0	-0	-0	-0

Test 208240515070

1.	14.1586	15.	30.
2.	4	11	0
	0	0	0
	1	10	0
	3	10	0

3. None
4.

STATION	BLOCKAGE	DISTRIBUTION FACTOR
1	0.00000	1.0000
2	0.00000	1.0000
3	0.00000	1.0000
4	0.00000	1.0000
5	.02500	0.0000
6	.02500	0.0000
7	.05000	1.0000
8	.16300	1.0000
9	.05400	1.0000
10	.05400	1.0000

SOLUTION TYPE INDICATORS

STATION	1	2	3	4	5	6	7	8	9	10
NMACH	0	0	-0	-0	-0	-0	-0	-0	-0	-0

Test 208240614270

1.	14.1586	15.	30.
2.	4	11	0
	0	0	0
	1	10	0
	3	10	0

3. None
4.

STATION	BLOCKAGE	DISTRIBUTION FACTOR
1	0.00000	1.0000
2	0.00000	1.0000
3	0.00000	1.0000
4	0.00000	1.0000
5	.02500	0.0000
6	.02500	0.0000
7	.05000	1.0000
8	.18000	1.0000
9	.05400	1.0000
10	.05400	1.0000

SOLUTION TYPE INDICATORS

STATION	1	2	3	4	5	6	7	8	9	10
NMACH	0	0	-0	-0	-0	-0	-0	-0	-0	-0

Test 208241115882

1.	14.1586	15.0	30.0		
2.	4	11	0		
	0	0	0		
	1	10	0		
	3	10	0		
3.	2	14	5	1	2

4. STATION BLOCKAGE DISTRIBUTION FACTOR

STATION	BLOCKAGE	DISTRIBUTION FACTOR
1	0.00000	1.0000
2	0.00000	1.0000
3	0.00000	1.0000
4	0.00025	1.0000
5	.02700	0.0000
6	.02700	0.0000
7	.05000	1.0000
8	.11930	1.0000
9	.05400	1.0000
10	.05400	1.0000

SOLUTION TYPE INDICATORS

STATION	1	2	3	4	5	6	7	8	9	10
NMACH	0	0	-0	-0	-0	-0	-0	-0	-0	-0

WITHIN-BLADE ONLY

5.	2	11	0
	2	11	0
	2	11	0
	2	11	0
	4	11	0

6. ROTOR GENERALISED PERFORMANCE LOSS 2 POINTS DEVIATION 4 POINTS

M-COORD	LOSS COEFF/TOTAL LOSS COEFF
0.0000	0.0000
1.0000	1.0000

OUTLET RADIUS = 7.5499

M-COORD	DEVIATION ANGLE (DEGREES)
.2000	-8.4000
.4000	-8.3000
.6000	-10.5000
.8000	-14.4000

```
OUTLET RADIUS =  7.9180

         M-COORD   DEVIATION ANGLE (DEGREES)

          .2000           -8.3000
          .4000           -8.4000
          .6000          -10.3000
          .8000          -13.7000

OUTLET RADIUS =  8.6699

         M-COORD   DEVIATION ANGLE (DEGREES)

          .2000           -8.3000
          .4000           -8.4000
          .6000          -11.0000
          .8000          -14.0000

STATOR GENERALISED PERFORMANCE   LOSS  2 POINTS  DEVIATION  6 POINTS

         M-COORD  LOSS COEFF/TOTAL LOSS COEFF

         0.0000           0.0000
         1.0000           1.0000

OUTLET RADIUS = 10.0000

         M-COORD   DEVIATION ANGLE (DEGREES)

         0.0000            .1000
          .2000            .1100
          .4000            .1500
          .6000            .2200
          .8000            .3800
         1.0000           1.0000

NUMBER OF TEST POINTS TO BE ANALYSED =   1

PSCALE= 1.50 PLOWER= 14.00 DAMPF=  5.000 NSAVE= 1  NEX= 2
```

STATION	BLOCKAGE	DISTRIBUTION FACTOR
1	0.00000	1.0000
2	0.00000	1.0000
3	0.00000	1.0000
4	.01000	1.0000
5	.01000	1.0000
6	.01500	.5000
7	.02000	.5000
8	.02500	.2000
9	.02000	0.0000
10	.05500	1.0000
11	.03000	1.0000
12	.05000	1.0000
13	.07000	1.0000
14	.09000	1.0000
15	.06000	1.0000
16	.08000	1.0000
17	.05400	1.0000

SOLUTION TYPE INDICATORS

STATION	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17
NMACH	0	0	-0	-0	-0	-0	-0	-0	-0	-0	-0	-0	0	-0	-0	-0	-0

7\.

POSITION NO.	SS PRESSURE(PSIA)
1	11.393
2	10.824
3	16.394
4	17.811
5	19.[illegible]55
6	19.418
7	19.804

	PS
1	21.610
2	23.187
3	23.597

Test 208241215782

1.	14.1586	15.	30.			
2.	4	11	0			
	0	0	0			
	1	10	0			
	3	10	0			
3.	2.	14.	5.0	1	2	

4.

STATION	BLOCKAGE	DISTRIBUTION FACTOR
1	0.00000	1.0000
2	0.00000	1.0000
3	0.00000	1.0000
4	0.00000	1.0000
5	.02700	0.0000
6	.02700	0.0000
7	.35000	1.0000
8	.13200	1.0000
9	.05400	1.0000
10	.05400	1.0000

SOLUTION TYPE INDICATORS

STATION	1	2	3	4	5	6	7	8	9	10
NMACH	0	0	-0	-0	-0	-0	-0	-0	-0	-0

Test 208241315682

1.	14.1586	15.	30.			
2.	4	11	0			
	0	0	0			
	1	10	0			
	3	10	0			
3.	2.	14.	5.0	1	2	

4.

STATION	BLOCKAGE	DISTRIBUTION FACTOR
1	0.00000	1.0000
2	0.00000	1.0000
3	0.00000	1.0000
4	0.00000	1.0000
5	.02700	0.0000
6	.02700	0.0000
7	.45000	1.0000
8	.14300	1.0000
9	.05400	1.0000
10	.05400	1.0000

SOLUTION TYPE INDICATORS

STATION	1	2	3	4	5	6	7	8	9	10
NMACH	0	0	-0	-0	-0	-0	-0	-0	-0	-0

Test 208241415582

1.	14.1586	15.	30.		
2.	4	11	0		
	0	0	0		
	1	10	0		
	3	10	0		
3.	2.	14.	5.0	1	2

4.

STATION	BLOCKAGE	DISTRIBUTION FACTOR
1	0.00000	1.0000
2	0.00000	1.0000
3	0.01000	1.0000
4	0.00000	1.0000
5	.02700	0.0000
6	.02700	0.0000
7	.05000	1.0000
8	.15200	1.0000
9	.05400	1.0000
10	.02400	1.0000

SOLUTION TYPE INDICATORS

STATION	1	2	3	4	5	6	7	8	9	10
NMACH	0	0	-0	-0	-0	-0	-0	-0	-0	-0

Test 208241515382

1.	14.1586	15.	30.		
2.	4	11	0		
	0	0	0		
	1	10	0		
	3	10	0		
3.	2.	14.	5.0	1	2

4.

STATION	BLOCKAGE	DISTRIBUTION FACTOR
1	0.00000	1.0000
2	0.00000	1.0000
3	0.01000	1.0000
4	0.00000	1.0000
5	.02700	0.0000
6	.02700	0.0000
7	.05000	1.0000
8	.13000	1.0000
9	.05400	1.0000
10	.05400	1.0000

SOLUTION TYPE INDICATORS

STATION	1	2	3	4	5	6	7	8	9	10
NMACH	0	0	-0	-0	-0	-0	-0	-0	-0	-0

Test 208300315990

1.	14.2770	15.0	30.0		
2.	4	11	0		
	0	0	0		
	1	10	0		
	3	10	0		
3.	2	14	5.0	1	2

4\. STATICN BLCCKAGE DISTRIBUTION FACTOR

STATICN	BLCCKAGE	DISTRIBUTION FACTOR
1	0.00000	1.0000
2	0.00000	1.0000
3	0.00000	1.0000
4	0.00000	1.0000
5	.07700	.8500
6	.08000	.8500
7	.10000	1.0000
8	.12700	1.0000
9	.05400	1.0000
10	.05400	1.0000

SOLUTION TYFE INDICATORS

STATICN	1	2	3	4	5	6	7	8	9	10
NMACH	0	0	-0	-0	-0	-0	-0	-0	-0	-0

WITHIN-BLADE ONLY

5.	2	11	0
	2	11	0
	2	11	0
	2	11	0
	4	11	0

6\. ROTOR GENERALISED PERFORMANCE LOSS 2 POINTS DEVIATION 4 POINTS

M-COORD	LOSS COEFF/TOTAL LOSS COEFF
0.0000	0.0000
1.0000	1.0000

OUTLET RADIUS = 7.5499

M-COORD	DEVIATION ANGLE (DEGREES)
.2000	-9.2700
.4000	-10.3000
.6000	-14.3000
.8000	-19.5000

OUTLET RADIUS = 7.9180

M-COORD	DEVIATION ANGLE (DEGREES)
.2000	-9.2700
.4000	-9.6500
.6000	-12.7000
.8000	-17.0000

OUTLET RADIUS = 8.6599

M-COORD	DEVIATION ANGLE (DEGREES)
.2000	-9.2700
.4000	-10.1500
.6000	-13.5000
.8000	-17.0000

STATOR GENERALISED PERFORMANCE LOSS 2 POINTS DEVIATION 6 POINTS

M-COORD	LOSS COEFF/TOTAL LOSS COEFF
0.0000	0.0000
1.0000	1.0000

OUTLET RADIUS = 0.0000

M-COORD	DEVIATION ANGLE (DEGREES)
0.0000	.1000
.2000	.1100
.4000	.1500
.6000	.2200
.8000	.3800
1.0000	1.0000

NUMBER OF TEST POINTS TO BE ANALYSED = 1

PSCALE= 1.50 P_OWER= 14.00 DAMPF= 5.000 NSAVE= 1 NEX= 2

STATION	BLOCKAGE	DISTRIBUTION FACTOR
1	0.00000	1.0000
2	0.00000	1.0000
3	0.00000	1.0000
4	.01000	1.0000
5	.01000	1.0000
6	.01500	.5000
7	.02000	.5000
8	.02300	.2000
9	.01300	0.0000
10	.05000	.5000
11	.07000	1.0000
12	.08500	1.0000
13	.10000	1.0000
14	.11000	1.0000
15	.06000	1.0000
16	.08000	1.0000
17	.05400	1.0000

SOLUTION TYPE INDICATORS

STATION	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17
NMACH	0	0	-0	-0	1	-0	-0	-0	-0	-0	-0	-0	0	-0	-0	-0	-0

7.

POSITION NO.	SS PRESSURE(PSIA)
1	11.172
2	11.832
3	17.515
4	18.919
5	2[illegible].118
6	23.494
7	2[illegible].988

	PS
1	23.276
2	2[illegible].[illegible]61
3	25.541

Test 208300215890

```
1.  14.277   15.   30.
2.   4       11     0
     0        0     0
     1       10     0
     3       10     0
3.   2.      14.    5.0   1   2
4.  STATICN  BLCCKAGE  DISTRIBUTION FACTOR

       1     0.00000        1.0000
       2     0.00000        1.0000
       3     0.00000        1.0000
       4     0.00000        1.0000
       5      .07000         .8500
       6      .07000         .8500
       7      .10000        1.0000
       8      .12800        1.0000
       9      .05400        1.0000
      10      .05400        1.0000

    SOLUTION TYPE INDICATORS

    STATION  1  2  3  4  5  6  7  8  9  10
    NMACH    0  0 -0 -0 -0 -0 -0 -0 -0 -0
```

Test 208300415890

```
1.  14.277   15.   30.
2.   4       11     0
     0        0     0
     1       10     0
     3       10     0
3.   2.      14.    5.0   1   2
4.  STATICN  BLCCKAGE  DISTRIBUTICN FACTOR

       1     0.00000        1.0000
       2     0.00000        1.0000
       3     0.00000        1.0000
       4     0.00000        1.0000
       5      .07500         .8500
       6      .07500         .8000
       7      .10000        1.0000
       8      .14400        1.0000
       9      .05400        1.0000
      10      .05400        1.0000

    SOLUTION TYPE INDICATORS

    STATION  1  2  3  4  5  6  7  8  9  10
    NMACH    0  0 -0 -0 -0 -0 -0 -0 -0 -0
```

Test 208300515690

```
1.  14.277   15.    30.
2.    4      11      0
      0       0      0
      1      10      0
      3      10      0
3.    2.     14.    5.0   1   2
4.  STATICN  BLCCKAGE  DISTRIBUTION FACTOR

       1      0.00000          1.0000
       2      0.00000          1.0000
       3      0.00000          1.0000
       4      0.00000          1.0000
       5       .06000           .7000
       6       .06000           .7000
       7       .10000          1.0000
       8       .16000          1.0000
       9       .05400          1.0000
      10       .05400          1.0000

    SCLUTION TYPE INDICATORS

    STATION  1  2  3  4  5  6  7  8  9  10
    NMACH    0  0 -0 -0 -0 -0 -0 -0 -0 -0
```

Test 208300615090

```
1.  14.277   15.    30.
2.    4      11      0
      0       0      0
      1      10      0
      3      10      0
3.    2.     14.    5.0   1   2
4.  STATICN  BLCCKAGE  DISTRIBUTICN FACTOR

       1      0.00000          1.0000
       2      0.00000          1.0000
       3      0.00000          1.0000
       4      0.00000          1.0000
       5       .07200           .6000
       6       .07200           .6500
       7       .10000          1.0000
       8       .19400          1.0000
       9       .05400          1.0000
      10       .05400          1.0000

    SCLUTICN TYPE INDICATORS

    STATICN  1  2  3  4  5  6  7  8  9  10
    NMACH    0  0 -0 -0 -0 -0 -0 -0 -0 -0
```

Test 208300915800

1.	14.2770	15.0	30.0		
2.	4	11	0		
	0	0	0		
	1	10	0		
	3	10	0		
3.	2	14	5.0	1	2

4\. STATION BLOCKAGE DISTRIBUTION FACTOR

STATION	BLOCKAGE	DISTRIBUTION FACTOR
1	0.00000	1.0000
2	0.00000	1.0000
3	0.00000	1.0000
4	0.00000	1.0000
5	.06000	1.0000
6	.06000	1.2500
7	.07500	1.0000
8	.17500	1.0000
9	.05400	1.0000
10	.05400	1.0000

SOLUTION TYPE INDICATORS

STATION	1	2	3	4	5	6	7	8	9	10
NMACH	0	0	-0	-0	-0	-0	-0	-0	-0	-0

<u>WITHIN-BLADE ONLY</u>

5.	2	11	0
	2	11	0
	2	11	0
	2	11	0
	4	11	0

6\. ROTOR GENERALISED PERFORMANCE LOSS 2 POINTS DEVIATION 4 POINTS

M-COORD	LOSS COEFF/TOTAL LOSS COEFF
0.0000	0.0000
1.0000	1.0000

OUTLET RADIUS = 7.5499

M-COORD	DEVIATION ANGLE (DEGREES)
.2000	-9.5000
~~.4000~~	~~-13.5000~~
.6000	-16.0700
.8000	-19.0000

OUTLET RADIUS = 7.9180

M-COORD	DEVIATION ANGLE (DEGREES)
.2000	-9.6000
.4000	-12.0000
.6000	-13.5600
.8000	-19.0000

OUTLET RADIUS = 8.6699

M-COORD	DEVIATION ANGLE (DEGREES)
.2000	-10.1500
.4000	-12.7000
.6000	-15.0000
.8000	-19.0000

STATOR GENERALISED PERFORMANCE LOSS 2 POINTS DEVIATION 6 POINTS

M-COORD	LOSS COEFF/TOTAL LOSS COEFF
0.0000	0.0000
1.0000	1.0000

OUTLET RADIUS = 0.0000

M-COORD	DEVIATION ANGLE (DEGREES)
0.0000	.1000
.2000	.1100
.4000	.1500
.6000	.2200
.8000	.3800
1.0000	1.0000

NUMBER OF TEST POINTS TO BE ANALYSED = 1

PSCALE= 2.00 P.OWER= 14.00 DAMPF= 5.000 NSAVE= 1 NEX= 2

STATION	BLOCKAGE	DISTRIBUTION FACTOR
1	0.00000	1.0000
2	0.00000	1.0000
3	0.00000	1.0000
4	.01000	1.0000
5	.01000	1.0000
6	.01500	.5000
7	.02000	.5000
8	.02000	.2000
9	.01900	0.0000
10	.05000	.5000
11	.07000	1.0000
12	.09400	1.0000
13	.11800	1.0000
14	.15000	1.0000
15	.06000	1.0000
16	.08000	1.0000
17	.05400	1.0000

SOLUTION TYPE INDICATORS

STATION	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17
NMACH	0	0	-0	-0	1	-0	-0	-0	-0	-0	-0	-0	0	-0	-0	-0	-0

7\.

POSITION NO.	SS PRESSURE (PSIA)
1	11.[illegible]01
2	13.396
3	17.516
4	18.325
5	19.531
6	19.926
7	2[illegible].359

	PS
1	25.[illegible]
2	26.749
3	27.136

```
Test 208300215700

1.  14.277    15.     30.
2.   4        11       0
     0         0       0
     1        10       0
     3        10       0
3.   2.       14.      5.0    1    2
4.  STATION   BLOCKAGE   DISTRIBUTION FACTOR

       1        0.00000           1.0000
       2        0.00000           1.0000
       3        0.00000           1.0000
       4        0.00000           1.0000
       5         .01600           1.0000
       6         .03500           1.5000
       7         .05000           1.0000
       8         .18400           1.0000
       9         .05400           1.0000
      10         .05400           1.0000

    SOLUTION TYPE INDICATORS

    STATION   1   2   3   4   5   6   7   8   9  10
    NMACH     0   0  -0  -0  -0  -0  -0  -0  -0  -0
```

```
Test 208301115500

1.  14.277    15.     30.
2.   4        11       0
     0         0       0
     1        10       0
     3        10       0
3.   2.       14.      5.0    1    2
4.  STATION   BLOCKAGE   DISTRIBUTION FACTOR

       1        0.00000           1.0000
       2        0.00000           1.0000
       3        0.00000           1.0000
       4        0.00000           1.0000
       5        0.00000           1.0000
       6         .02100           2.0000
       7         .05000           1.0000
       8         .19700           1.0000
       9         .05400           1.0000
      10         .05400           1.0000

    SOLUTION TYPE INDICATORS

    STATION   1   2   3   4   5   6   7   8   9  10
    NMACH     0   0  -0  -0  -0  -0  -0  -0  -0  -0
```

Test 208301215100

```
1.   14.277    15.    30.
2.    4        11      0
      0         0      0
      1        10      0
      3        10      0
3.    2.       14.     5.0   1   2
4.   STATION  BLCCKAGE  DISTRIBUTION FACTOR
```

STATION	BLCCKAGE	DISTRIBUTION FACTOR
1	0.00000	1.0000
2	0.00000	1.0000
3	0.00000	1.0000
4	0.00000	1.0000
5	0.00000	1.0000
6	.02500	2.0000
7	.05000	1.0000
8	.22800	1.0000
9	.05400	1.0000
10	.05400	1.0000

SCLUTION TYFE INDICATCRS

STATICN	1	2	3	4	5	6	7	8	9	10
NMACH	0	0	-0	-0	-0	-0	-0	-0	-0	-0

APPENDIX C

MODIFIED PROGRAM LISTINGS

This appendix presents listings of new and modified computer routines used in conjunction with the programs of References 4 and 5 to reduce the experimental test data.

I. PHASE I - SUBROUTINE TPRED

```
      SUBROUTINE TPRED (LSKIP,LEROR,PLUS,AMINS,F,I,NJMCD,IN,IVOLT,IEXP,  TPR   1
     1NC,NTEDE)                                                          TPR   1A
      DIMENSION IVOLT(1,1), IN(1,1), IEXP(1,1), NUMCD(1), A(512)         TPR   2
    5 BUFFER IN (2,0) (A(1),A(512))                                      TPR   3
      IF (UNIT(2)) 10,30,25                                              TPR   4
   10 NW=LENGTH(2)                                                       TPR   5
      IF (NW.LT.2) WRITE (6,45)                                          TPR   6
      IF (NW.LT.2) GO TO 5                                               TPR   7
      REWIND 1                                                           TPR   8
      WRITE (1,50) A(1),A(2)                                             TPR   9
      REWIND 1                                                           TPR  10
      READ (1,55) N1                                                     TPR  11
      READ (1,55) N2                                                     TPR  12
      AN1=N1                                                             TPR  13
      AN2=N2                                                             TPR  14
      AMCD=AN1*10.**9+AN2                                                TPR  15
      NUMCD(I)=AMCD                                                      TPR  16
      IF (LSKIP.EQ.0) GO TO 15                                           TPR  17
      WRITE (6,40) NUMCD(I)                                              TPR  18
      IF (NUMCD(1).LT.NTEDE) GO TO 5                                     TPR  19
      IF (NUMCD(1).GT.NTEDE) CALL ERROR (8)                              TPR  20
      IF (NUMCD(1).GT.NTEDE) LEROR=1                                     TPR  21
      IF (NUMCD(1).GT.NTEDE) GO TO 35                                    TPR  22
   15 CONTINUE                                                           TPR  23
      REWIND 1                                                           TPR  24
      WRITE (1,50) (A(J),J=3,NW)                                         TPR  25
      REWIND 1                                                           TPR  26
      NW=NW/2-1                                                          TPR  27
      IF (NW.NE.NC) WRITE (6,60) NW,NC                                   TPR  28
      DO 20 J=1,NC                                                       TPR  29
      READ (1,65) IN(I,J)                                                TPR  30
      READ (1,70) CHAR,IVOLT(I,J),IEXP(I,J)                              TPR  31
      IF (CHAR.EQ.PLUS) GO TO 20                                         TPR  32
      IF (CHAR.EQ.AMINS) IVOLT(I,J)=-IVOLT(I,J)                          TPR  33
   20 CONTINUE                                                           TPR  34
      GO TO 35                                                           TPR  35
   25 CALL ERROR (9)                                                     TPR  36
      LEROR=1                                                            TPR  37
      GO TO 35                                                           TPR  38
   30 CONTINUE                                                           TPR  39
      GO TO 5                                                            TPR  40
   35 CONTINUE                                                           TPR  41
      RETURN                                                             TPR  42
   40 FORMAT (10X,I12)                                                   TPR  43
   45 FORMAT (5X,37HA SHORT DATA RECORD HAS BEEN DETECTED)               TPR  44
   50 FORMAT (A10)                                                       TPR  45
   55 FORMAT (I10)                                                       TPR  46
   60 FORMAT (5X,13HTROUBLE -NW= ,I3,5X,4HNC= ,I3)                       TPR  47
   65 FORMAT (7X,I3)                                                     TPR  48
   70 FORMAT (2X,A1,I6,I1)                                               TPR  49
      END                                                                TPR  50-
```

2. PHASE I - PROGRAM INPUT

```
      PROGRAM INP
      INTEGER ZPTS,ZTYPE
      DIMENSION IEXP(1,150), IVOLT(1,150), IN(1,150), PSCAN(4,25), TEMP(
     14,50), TEMPA(1,50), XDATA(75), XDUM(75), YDATA(75), YDUM(75)
      DIMENSION ACPCO(11), AMACH(1,25), AMASS(1), APDAT(40), ARHO(1,25),
     1 AV(1,25), AWALS(1,10), BETA(40), BLASP(1,10), B2K(40), CALBM(20),
     2 CMACH(1,10), CORN(1), CP(1), CV(1,10), DMXSP(1,10), DPT(40), DUPT
     3T(1), DWALS(1,12), EQTEM(40), GAMAV(1,10), GAMMA(1), GASK(1)
      DIMENSION ICALP(4,5), IEDIT(1), ITPR(16,50), I1(4,25), I2(4,50), I
     12A(4,50), NDATA(4), NSCX(4), NTCX(4), NTYPE(4), NTYTE(4), NUMCD(1)
     2, PBLAP(1,10), PINER(1,4), PLEPR(1,10), POWER(1,4), PO1(1), PO3AV(
     31,10), PSI(1,5), PSTA(1,10), R(20), RAD(20), RECOV(20)
      DIMENSION RELH(1), RPM(1), SRAD(20), TCTEF(10), TDAT(40), TDATA(4,
     140), TEDAT(40), TEF(10), THETA(20), TOPT(1,10), TORT(1,10), TOST(1
     2,25), TOSTC(1,25), TOTPR(1,10), TOTPS(1,25), TO1(1), TO3AV(1,10),
     3TSTA(1,25), UWALS(1,12), VDAT(40), VDATA(4,40), VENPR(1,5), VOLTG(
     41,150)
      DIMENSION WACT(1), WCORR(1), WCPCO(11), WINT(1), X(20), ZFAC1(1),
     1ZFAC2(1), ZPRES(20), ZREC(20)
      DIMENSION BWALS(1,12), UWALA(1,10)
      DIMENSION IATGG(5), PCAL(1,5), PATM(1,5)
      COMMON IN,IVOLT,IEXP
      COMMON ACPCO,AMACH,AMASS,APDAT,ARHO,AV,AWALS,B,BETA,BLASP,B2K,CALB
     1M,CMACH,CORN,CP,CQ,CV,C1,C2,C3,DI,DMXSP,DPT,DUPTT,DWALS,EQTEM,G,GA
     2MAV,GAMMA,GASK,ICALP,IEDIT,INODP,INRPM,ITPR,I1,I2,I2A,JJ,JREDN,JT,
     3KPTS,KREDN,KTYPE,LEROR,LPTS,LSKIP
      COMMON MPTS,MTAP,MTYPE,NACPC,NC,NDATA,NJ1,NKTYP,NLPTS,NOAWJ,NOBPJ,
     1NOBSJ,NOCAJ,NODWJ,NOPPJ,NOPTJ,NORTJ,NOSTJ,NOTPJ,NOTSJ,NOUWJ,NOVNJ,
     2NPNCH,NPTEF,NR,NRAKE,NREAL,NSCX,NTAP,NTCX,NTYPE,NTYTE,NUMCD,NUPTS,
     3NVTYP,NWCPC,NWTYP,PBLAP,PINER,PLEPR,POWER,PO1,PO3AV,PPRTL,PSI,PSTA
     4,PTTOL
      COMMON R,RA,RAD,RCONV,RECOV,RELH,RHUB,RPM,RTIP,RV,SPEED,SRAD,STDP,
     1STDT,TCTEF,TDAT,TDATA,TEDAT,TEF,THETA,TOLWS,TOPT,TORT,TOST,TOSTC,T
     2OTPR,TOTPS,TO1,TO3AV,TSTA,UWALS,VDAT,VDATA,VENPR,VOLTG,WACT,WCORR,
     3WCPCO,WINT,X,X1,X2,Z,ZFAC1,ZFAC2
      COMMON ZPRES,ZPREF,ZPTS,ZREC,ZTYPE
      COMMON ITRIG,I,NOBWJ,X13,NOUWA,X1A,BWALS,UWALA
      COMMON NDATM,IATGG,PCAL,PATM
      DATA PLUS/1H+/,AMINS/1H-/,F/1HF/
      IF (NJ1-1) 10,10,5
    5 WRITE (6,490)
   10 READ (5,455) NR,ISET,NREAL,NPNCH
      WRITE (6,455) NR,ISET,NREAL,NPNCH
      GO TO (20,45,180,190,195,15), ISET
   15 CALL ERROR (1)
      LEROR=1
      GO TO 450
   20 READ (5,455) LPTS,NVTYP
      READ (5,460) (TEDAT(K),K=1,LPTS)
      READ (5,460) (APDAT(K),K=1,LPTS)
      READ (5,460) X1,X1A,X13,X2
      READ (5,460) B,DI
      READ (5,460) CQ,C1,C2,C3,G,Z
      READ (5,455) MPTS,NWTYP
      READ (5,460) (BETA(K),K=1,MPTS)
      READ (5,460) (B2K(K),K=1,MPTS)
      READ (5,455) NPTEF
      READ (5,460) (TCTEF(K),K=1,NPTEF)
      READ (5,460) (TEF(K),K=1,NPTEF)
      READ (5,455) NUPTS,MTYPE
```

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      READ (5,450) (CALBM(I),I=1,NUPTS
      READ (5,460) (RECOV(I),I=1,NUPTS)
      READ (5,460) ZPREF
      READ (5,455) ZPTS,ZTYPE
      READ (5,460) (ZPRES(K),K=1,ZPTS)
      READ (5,460) (ZREC(K),K=1,ZPTS)
      READ (5,455) KPTS,NKTYP
      READ (5,460) (EQTEM(K),K=1,KPTS)
      READ (5,460) (DPT(K),K=1,KPTS)
      READ (5,455) NACPC
      READ (5,470) (ACPCO(J),J=1,NACPC)
      READ (5,455) NWCPC
      READ (5,470) (WCPCO(J),J=1,NWCFC)
      WRITE (6,475)
      WRITE (6,455) LPTS,NVTYP
      WRITE (6,460) (TEDAT(K),K=1,LPTS)
      WRITE (6,460) (APDAT(K),K=1,LPTS)
      WRITE (6,460) X1,X1A,X1B,X2
      WRITE (6,460) B,DI
      WRITE (6,460) CQ,C1,C2,C3,G,Z
      WRITE (6,455) MPTS,NWTYP
      WRITE (6,460) (BETA(K),K=1,MPTS)
      WRITE (6,460) (B2K(K),K=1,MPTS)
      WRITE (6,455) NPTEF
      WRITE (6,460) (TCTEF(K),K=1,NPTEF)
      WRITE (6,460) (TEF(K),K=1,NPTEF)
      WRITE (6,455) NUPTS,MTYPE
      WRITE (6,460) (CALBM(J),J=1,NUPTS)
      WRITE (6,460) (RECOV(J),J=1,NUPTS)
      WRITE (6,460) ZPREF
      WRITE (6,455) ZPTS,ZTYPE
      WRITE (6,460) (ZPRES(K),K=1,ZPTS)
      WRITE (6,460) (ZREC(K),K=1,ZPTS)
      WRITE (6,455) KPTS,NKTYP
      WRITE (6,460) (EQTEM(K),K=1,KPTS)
      WRITE (6,460) (DPT(K),K=1,KPTS)
      WRITE (6,490)
      WRITE (6,455) NACPC
      WRITE (6,470) (ACPCO(J),J=1,NA3PC)
      WRITE (6,455) NWCPC
      WRITE (6,470) (WCPCO(J),J=1,NWCPC)
      READ (5,455) JJ
      WRITE (6,455) JJ
      DO 25 J=1,JJ
      READ (5,455) NSCV,NSCX(NSCV)
      WRITE (6,455) NSCV,NSCX(NSCV)
      NSC=NSCX(NSCV)
      READ (5,455) (I1(NSCV,K),K=1,NSC)
      WRITE (6,455) (I1(NSCV,K),K=1,NSC)
25    CONTINUE
      READ (5,455) JT
      WRITE (6,455) JT
      DO 40 J=1,JT
      IF (J-2) 35,30,35
30    WRITE (6,490)
35    CONTINUE
      READ (5,455) NTCV,NTCX(NTCV)
      WRITE (6,455) NTCV,NTCX(NTCV)
      NTC=NTCX(NTCV)
      READ (5,455) (I2(NTCV,K),K=1,NTC)
```

```
      WRITE (6,455) (I2(NTCV,K),K=1,NTC)                                INP 121
      READ (5,455) (I2A(NTCV,K),K=1,NTC)                                INP 122
      WRITE (6,455) (I2A(NTCV,K),K=1,NTC)                               INP 123
      READ (5,455) NDATA(NTCV),NTYTE(NTCV)                              INP 124
      WRITE (6,455) NDATA(NTCV),NTYTE(NTCV)                             INP 125
      NDATJ=NDATA(NTCV)                                                 INP 126
      READ (5,460) (VDATA(NTCV,K),K=1,NDATJ)                            INP 127
      WRITE (6,460) (VDATA(NTCV,K),K=1,NDATJ)                           INP 128
      READ (5,460) (TDATA(NTCV,K),K=1,NDATJ)                            INP 129
      WRITE (6,460) (TDATA(NTCV,K),K=1,NDATJ)                           INP 130
40    CONTINUE                                                          INP 131
45    CONTINUE                                                          INP 132
      WRITE (6,490)                                                     INP 133
      WRITE (6,480)                                                     INP 134
      READ (5,455) JREDN,MTAP,KREDN,NRAKE,NTAP,NC                       INP 135
      WRITE (6,455) JREDN,MTAP,KREDN,NRAKE,NTAP,NC                      INP 136
      READ (5,460) SPEED,RHUBR,RHUB,RTIP                                INP 137
      WRITE (6,465) SPEED,RHUBR,RHUB,RTIP                               INP 138
      READ (5,460) (THETA(J),J=1,NRAKE)                                 INP 139
      WRITE (6,460) (THETA(J),J=1,NRAKE)                                INP 140
      READ (5,460) (RAD(J),J=1,MTAP)                                    INP 141
      WRITE (6,460) (RAD(J),J=1,MTAP)                                   INP 142
      READ (5,450) (SRAD(J),J=1,NTAP)                                   INP 143
      WRITE (6,460) (SRAD(J),J=1,NTAP)                                  INP 144
      ANHT=RTIP-RHUB                                                    INP 145
      DO 50 J=1,NTAP                                                    INP 146
50    R(J)=(SRAD(J)-RHUB)/ANHT                                          INP 147
      READ (5,460) STOP,STOT,RA,RV,RCONV                                INP 148
      WRITE (6,460) STOP,STOT,RA,RV,RCONV                               INP 149
      DO 155 I=1,16                                                     INP 150
      READ (5,455) L1,NOL                                               INP 151
      WRITE (6,455) L1,NOL                                              INP 152
      GO TO (55,60,65,70,75,80,85,90,95,100,105,110,115,135,140,145), L1INP 153
55    NOPPJ=NOL                                                         INP 154
      IF (NOL) 155,155,150                                              INP 155
60    NOPTJ=NOL                                                         INP 156
      IF (NOL) 155,155,150                                              INP 157
65    NOTPJ=NOL                                                         INP 158
      IF (NOL) 155,155,150                                              INP 159
70    NORTJ=NOL                                                         INP 160
      IF (NOL) 155,155,150                                              INP 161
75    NOTSJ=NOL                                                         INP 162
      IF (NOL) 155,155,150                                              INP 163
80    NOSTJ=NOL                                                         INP 164
      IF (NOL) 155,155,150                                              INP 165
85    NODWJ=NOL                                                         INP 166
      IF (NOL) 155,155,150                                              INP 167
90    NOVWJ=NOL                                                         INP 168
      IF (NOL) 155,155,150                                              INP 169
95    NOUWJ=NOL                                                         INP 170
      IF (NOL) 155,155,150                                              INP 171
100   NOAWJ=NOL                                                         INP 172
      READ (5,460) (X(K),K=1,NOL)                                       INP 173
      WRITE (6,460) (X(K),K=1,NOL)                                      INP 174
      IF (NOL) 155,155,150                                              INP 175
105   NOBSJ=NOL                                                         INP 176
      IF (NOL) 155,155,150                                              INP 177
110   NOBPJ=NOL                                                         INP 178
      IF (NOL) 155,155,150                                              INP 179
115   NOCAJ=NOL                                                         INP 180
```

```
      DO 130 J=1,JJ
      IF (J-3) 125,120,125
120   WRITE (6,490)
125   CONTINUE
      READ (5,455) NTYPE(J)
      WRITE (6,455) NTYPE(J)
      READ (5,455) (ICALP(J,K),K=1,NOCAJ)
      WRITE (6,455) (ICALP(J,K),K=1,NOCAJ)
130   CONTINUE
      GO TO 155
135   NOBWJ=NOL
      IF (NOL) 155,155,150
140   NOUWA=NOL
      IF (NOL) 155,155,150
145   NOATM=NOL
      IF (NOL) 155,155,150
150   READ (5,455) (ITPR(L1,K),K=1,NOL)
      WRITE (6,455) (ITPR(L1,K),K=1,NOL)
155   CONTINUE
      READ (5,455) INRPM,INOOP
      WRITE (6,455) INRPM,INOOP
      READ (5,455) JDUM
      WRITE (6,455) JDUM
      IF (JDUM) 160,160,165
160   READ (5,455) NLPTS,KTYPE
      WRITE (6,455) NLPTS,KTYPE
      READ (5,460) (VDAT(K),K=1,NLPTS)
      WRITE (6,460) (VDAT(K),K=1,NLPTS)
      READ (5,460) (TDAT(K),K=1,NLPTS)
      WRITE (6,460) (TDAT(K),K=1,NLPTS)
      GO TO 175
165   NLPTS=NDATA(JDUM)
      KTYPE=NTYPE(JDUM)
      DO 170 K=1,NLPTS
      VDAT(K)=VDATA(JDUM,K)
170   TDAT(K)=TDATA(JDUM,K)
175   CONTINUE
180   CONTINUE
      WRITE (6,485)
      READ (5,455) (IATGG(K),K=1,NOCAJ)
      WRITE (6,455) (IATGG(K),K=1,NOCAJ)
      DO 185 I=1,NR
      READ (5,460) (PSI(I,K),K=1,NOCAJ)
      WRITE (6,460) (PSI(I,K),K=1,NOCAJ)
185   CONTINUE
190   CONTINUE
      READ (5,460) TOLWS,PPRTL,PTTOL
      WRITE (6,460) TOLWS,PPRTL,PTTOL
195   CONTINUE
      DO 200 I=1,NR
      IF (LSKIP.EQ.1) GO TO 200
      CALL TPRED (LSKIP,LEROR,PLUS,AMINS,F,1,NUMCO,IN,IVOLT,IEXP,NC,NTED
     1E)
200   CONTINUE
      DO 215 I=1,NR
      DO 215 J=1,NC
      IF (IN(I,J)-INRPM) 210,205,210
205   RPM(I)=FLOAT(IVOLT(I,J))*10.
      VOLTS(I,J)=RPM(I)
      GO TO 215
```

```
210   CONTINUE                                                        INP 241
      IEIJ=IEXP(I,J)                                                  INP 242
      VOLTG(I,J)=IVOLT(I,J)                                           INP 243
      VOLTG(I,J)=VOLTG(I,J)/10.**IEIJ                                 INP 244
215   CONTINUE                                                        INP 245
      NN=-JT+1                                                        INP 246
      N=-JJ+1                                                         INP 247
      DO 305 I=1,NR                                                   INP 248
      N=N+JJ                                                          INP 249
      NV=N+JJ-1                                                       INP 250
      DO 230 LL=N,NV                                                  INP 251
      JL=LL-JJ*(I-1)                                                  INP 252
      NSC=NSCX(JL)                                                    INP 253
      DO 230 KM1=1,NSC                                                INP 254
      DO 225 J=1,NC                                                   INP 255
      IF (I1(JL,KM1)-IN(I,J)) 225,220,225                             INP 256
220   PSCAN(LL,KM1)=VOLTG(I,J)                                        INP 257
      GO TO 230                                                       INP 258
225   CONTINUE                                                        INP 259
230   CONTINUE                                                        INP 260
      NN=NN+JT                                                        INP 261
      NNV=NN+JT-1                                                     INP 262
      DO 245 L=NN,NNV                                                 INP 263
      KL=L-JT*(I-1)                                                   INP 264
      NTC=NTCX(KL)                                                    INP 265
      DO 245 KM1=1,NTC                                                INP 266
      DO 240 J=1,NC                                                   INP 267
      IF (I2(KL,KM1)-IN(I,J)) 240,235,240                             INP 268
235   TEMP(L,KM1)=VOLTG(I,J)                                          INP 269
      GO TO 245                                                       INP 270
240   CONTINUE                                                        INP 271
245   CONTINUE                                                        INP 272
      IF (NOATM) 290,290,250                                          INP 273
250   CONTINUE                                                        INP 274
      DO 265 K=1,NOATM                                                INP 275
      KK=ITPR(16,K)/100                                               INP 276
      NADAT=0                                                         INP 277
      DO 260 J=1,NOCAJ                                                INP 278
      JINT=KK+(I-1)*JJ                                                INP 279
      IF (IATGG(J)) 260,255,260                                       INP 280
255   NADAT=NADAT+1                                                   INP 281
      ICALJ=(ICALP(KK,J)-KK*100+1)/2                                  INP 282
      XDATA(NADAT)=PSCAN(JINT,ICALJ)                                  INP 283
      YDATA(NADAT)=PSI(I,J)                                           INP 284
260   CONTINUE                                                        INP 285
      ICHAN=(ITPR(16,K)-KK*100+1)/2                                   INP 286
      CALL ON (XDATA,YDATA,NADAT,PSCAN(JINT,ICHAN),PATM(I,K),1,1)     INP 287
265   CONTINUE                                                        INP 288
      PATAV=0.                                                        INP 289
      DO 270 K=1,NOATM                                                INP 290
270   PATAV=PATAV+PATM(I,K)                                           INP 291
      ATM=FLOAT(NOATM)                                                INP 292
      PATAV=PATAV/ATM                                                 INP 293
      DO 285 J=1,NOCAJ                                                INP 294
      IF (IATGG(J)) 280,280,275                                       INP 295
275   PCAL(I,J)=PSI(I,J)+PATAV                                        INP 296
      GO TO 285                                                       INP 297
280   PCAL(I,J)=PSI(I,J)                                              INP 298
285   CONTINUE                                                        INP 299
      GO TO 300                                                       INP 300
```

```
290   DO 295 J=1,NOCAJ                                                  INP 301
295   PCAL(I,J)=PSI(I,J)                                                INP 302
300   CONTINUE                                                          INP 303
305   CONTINUE                                                          INP 304
      N=-JJ+1                                                           INP 305
      NN=-JT+1                                                          INP 306
      DO 370 I=1,NR                                                     INP 307
      DO 315 J=1,NC                                                     INP 308
      IF (IN(I,J)-INODP) 315,310,315                                    INP 309
310   XDUM(1)=VOLTG(I,J)                                                INP 310
315   CONTINUE                                                          INP 311
      CALL DN (VDAT,TDAT,NLPTS,XDUM,YDUM,1,KTYPE)                       INP 312
      CALL DN (EQTEM,DPT,KPTS,YDUM,XDUM,1,NKTYP)                        INP 313
      DUPTT(I)=XDUM(1)                                                  INP 314
      DO 320 JJP=1,4                                                    INP 315
320   VENPR(I,JJP)=0.                                                   INP 316
      N=N+JJ                                                            INP 317
      NV=N+JJ-1                                                         INP 318
      DO 340 L=N,NV                                                     INP 319
      KLL=L-JJ*(I-1)                                                    INP 320
      DO 325 K=1,NOCAJ                                                  INP 321
      ICALJ=(ICALP(KLL,K)-KLL*100+1)/2                                  INP 322
      XDATA(K)=PSCAN(L,ICALJ)                                           INP 323
325   YDATA(K)=PCAL(I,K)                                                INP 324
      NSC=NSCX(KLL)                                                     INP 325
      DO 330 K=1,NSC                                                    INP 326
330   XDUM(K)=PSCAN(L,K)                                                INP 327
      NTY=NTYPE(KLL)                                                    INP 328
      CALL DN (XDATA,YDATA,NOCAJ,XDUM,YDUM,NSC,NTY)                     INP 329
      DO 335 K=1,NSC                                                    INP 330
335   PSCAN(L,K)=YDUM(K)                                                INP 331
340   CONTINUE                                                          INP 332
      NN=NN+JT                                                          INP 333
      NNV=NN+JT-1                                                       INP 334
      DO 365 L=NN,NNV                                                   INP 335
      KL=L-JT*(I-1)                                                     INP 336
      NTOT=NTCX(KL)                                                     INP 337
      NDATJ=NDATA(KL)                                                   INP 338
      DO 345 K=1,NTOT                                                   INP 339
345   XDUM(K)=TEMP(L,K)                                                 INP 340
      DO 350 K=1,NDATJ                                                  INP 341
      XDATA(K)=VDATA(KL,K)                                              INP 342
350   YDATA(K)=TDATA(KL,K)                                              INP 343
      NTT=NTYPE(KL)                                                     INP 344
      CALL DN (XDATA,YDATA,NDATJ,XDUM,YDUM,NTOT,NTT)                    INP 345
      DO 355 K=1,NTOT                                                   INP 346
355   TEMP(L,K)=YDUM(K)                                                 INP 347
      DO 360 KM1=1,NTOT                                                 INP 348
      JKL=I2A(KL,KM1)                                                   INP 349
360   TEMPA(I,JKL)=TEMP(L,KM1)                                          INP 350
365   CONTINUE                                                          INP 351
370   CONTINUE                                                          INP 352
      DO 445 L=1,15                                                     INP 353
      GO TO (375,380,385,390,395,400,405,410,415,420,425,430,445,435,440INP 354
     1), L                                                              INP 355
375   NL=0                                                              INP 356
      M=4                                                               INP 357
      CALL ALLOT (NOPPJ,PSCAN,M,NR,PLEPR,ITPR,L,JJ,NL)                  INP 358
      GO TO 445                                                         INP 359
380   NL=1                                                              INP 360
```

```
      M=1                                                               INP 361
      CALL ALLOT (NOPTJ,TEMPA,M,NR,TOPT,ITPR,L,JT,NL)                   INP 362
      GO TO 445                                                         INP 363
  385 NL=0                                                              INP 364
      M=4                                                               INP 365
      CALL ALLOT (NOTPJ,PSCAN,M,NR,TOTPR,ITPR,L,JJ,NL)                  INP 366
      GO TO 445                                                         INP 367
  390 NL=1                                                              INP 368
      M=1                                                               INP 369
      CALL ALLOT (NORTJ,TEMPA,M,NR,TORT,ITPR,L,JT,NL)                   INP 370
      GO TO 445                                                         INP 371
  395 NL=0                                                              INP 372
      M=4                                                               INP 373
      CALL ALLOT (NOTSJ,PSCAN,M,NR,TOTPS,ITPR,L,JJ,NL)                  INP 374
      GO TO 445                                                         INP 375
  400 NL=1                                                              INP 376
      M=1                                                               INP 377
      CALL ALLOT (NOSTJ,TEMPA,M,NR,TOST,ITPR,L,JT,NL)                   INP 378
      GO TO 445                                                         INP 379
  405 NL=0                                                              INP 380
      M=4                                                               INP 381
      CALL ALLOT (NODWJ,PSCAN,M,NR,DWALS,ITPR,L,JJ,NL)                  INP 382
      GO TO 445                                                         INP 383
  410 NL=0                                                              INP 384
      M=4                                                               INP 385
      CALL ALLOT (NOVNJ,PSCAN,M,NR,VENPR,ITPR,L,JJ,NL)                  INP 386
      GO TO 445                                                         INP 387
  415 NL=0                                                              INP 388
      M=4                                                               INP 389
      CALL ALLOT (NOUWJ,PSCAN,M,NR,UWALS,ITPR,L,JJ,NL)                  INP 390
      GO TO 445                                                         INP 391
  420 NL=0                                                              INP 392
      M=4                                                               INP 393
      CALL ALLOT (NOAWJ,PSCAN,M,NR,AWALS,ITPR,L,JJ,NL)                  INP 394
      GO TO 445                                                         INP 395
  425 NL=0                                                              INP 396
      M=4                                                               INP 397
      CALL ALLOT (NOBSJ,PSCAN,M,NR,BLASP,ITPR,L,JJ,NL)                  INP 398
      GO TO 445                                                         INP 399
  430 NL=0                                                              INP 400
      M=4                                                               INP 401
      CALL ALLOT (NOBPJ,PSCAN,M,NR,PBLAP,ITPR,L,JJ,NL)                  INP 402
      GO TO 445                                                         INP 403
  435 NL=0                                                              INP 404
      M=4                                                               INP 405
      CALL ALLOT (NOBWJ,PSCAN,M,NR,BWALS,ITPR,L,JJ,NL)                  INP 406
      GO TO 445                                                         INP 407
  440 NL=0                                                              INP 408
      M=4                                                               INP 409
      CALL ALLOT (NOUWA,PSCAN,M,NR,UWALA,ITPR,L,JJ,NL)                  INP 410
  445 CONTINUE                                                          INP 411
  450 CONTINUE                                                          INP 412
  455 FORMAT (20I4)                                                     INP 413
  460 FORMAT (8F10.4)                                                   INP 414
  465 FORMAT (1X,F9.3,7F10.4)                                           INP 415
  470 FORMAT (4E20.8)                                                   INP 416
  475 FORMAT (/16H BASIC DATA DECK)                                     INP 417
  480 FORMAT (/26H INSTRUMENTATION DATA DECK)                           INP 418
  485 FORMAT (/11H OTHER DATA)                                          INP 419
  490 FORMAT (1H1)                                                      INP 420
      END                                                               INP 421-
```

3. PHASE I - SUBROUTINE OUT

```
      SUBROUTINE OUT
      INTEGER ZPTS,ZTYPE
      DIMENSION TORTA(20), TOPRA(20), P3TAV(20), T3TAV(20)
      DIMENSION ACPCO(11), AMACH(1,25), AMASS(1), APDAT(40), ARHO(1,25),
     1 AV(1,25), AWALS(1,10), BETA(40), BLASP(1,10), B2K(40), CALBM(20).
     2 CHACH(1,10), CORN(1), CP(1), CV(1,10), DMXSP(1,10), DPT(40), DUPT
     3T(1), DWALS(1,12), EQTEM(40), GAMAV(1,10), GAMMA(1), GASK(1)
      DIMENSION ICALP(4,5), IEDIT(1), ITPR(15,50), I1(4,25), I2(4,50), I
     12A(4,50), NDATA(4), NSCX(4), NTCX(4), NTYPE(4), NTYTE(4), NUMCO(1)
     2, PBLAP(1,10), PINER(1,4), PLEPR(1,10), POUER(1,4), PO1(1), PO3AV(
     31,10), PSI(1,5), PSTA(1,10), R(20), RAD(20), RECOV(20)
      DIMENSION RELH(1), RPM(1), SRAD(20), TCTEF(10), TDAT(40), TDATA(4,
     140), TEDAT(40), TEF(10), THETA(20), TOPT(1,10), TORT(1,10), TOST(1
     2,25), TOSTC(1,25), TOTPR(1,10), TOTPS(1,25), TO1(1), TO3AV(1,10),
     3TSTA(1,25), UWALS(1,12), VDAT(40), VDATA(4,40), VENPR(1,5), VOLTG(
     41,150)
      DIMENSION WACT(1), WCORR(1), WCPCO(11), WINT(1), X(20), ZFAC1(1),
     1ZFAC2(1), ZPRES(20), ZREC(20)
      DIMENSION BWALS(1,12), UWALA(1,10)
      DIMENSION IATGG(5), PCAL(1,5), PATM(1,5)
      DIMENSION IN(1,150), IVOLT(1,150), IEXP(1,150)
      COMMON IN,IVOLT,IEXP
      COMMON ACPCO,AMACH,AMASS,APDAT,ARHO,AV,AWALS,B,BETA,BLASP,B2K,CALB
     1M,CHACH,CORN,CP,CQ,CV,C1,C2,C3,DI,DMXSP,DPT,DUPTT,DWALS,EQTEM,G,GA
     2MAV,GAMMA,GASK,ICALP,IEDIT,INODP,INRPM,ITPR,I1,I2,I2A,JJ,JREDN,JT,
     3KPTS,KREDN,KTYPE,LEROR,LPTS,LSKIP
      COMMON MPTS,MTAP,MTYPE,NACPC,NC,NDATA,NJ1,NKTYP,NLPTS,NOAWJ,NOBPJ,
     1NOBSJ,NODAJ,NODWJ,NOPPJ,NOPTJ,NORTJ,NOSTJ,NOTPJ,NOTSJ,NOUWJ,NOVWJ,
     2NPNCH,NPTEF,NR,NRAKE,NREAL,NSCK,NTAP,NTCX,NTYPE,NTYTE,NUMCO,NUPTS,
     3NVTYP,NWCPC,NWTYP,PBLAP,PINER,PLEPR,POUER,PO1,PO3AV,PPRTL,PSI,PSTA
     4,PTTOL
      COMMON R,RA,RAD,RCONV,RECOV,RELH,RHUB,RPM,RTIP,RV,SPEED,SRAD,STDP,
     1STDT,TCTEF,TDAT,TDATA,TEDAT,TEF,THETA,TOLWS,TOPT,TORT,TOST,TOSTC,T
     2OTPR,TOTPS,TO1,TO3AV,TSTA,UWALS,VDAT,VDATA,VENPR,VOLTG,WACT,WCORR,
     3WCPCO,WINT,X,X1,X2,Z,ZFAC1,ZFAC2
      COMMON ZPRES,ZPREF,ZPTS,ZREC,ZTYPE
      COMMON ITRIG,I,NOBWJ,X1B,NOUWA,X1A,BWALS,UWALA
      COMMON NDATM,IATGG,PCAL,PATM
      IF (NJ1-1) 5,5,10
    5 WRITE (6,285)
      WRITE (6,290)
   10 WRITE (6,300) NJ1,NR,SPEED
      DO 275 I=1,NR
      FAC1=TO1(I)/STDT
      FAC2=PO1(I)/STDP
      IF (I-1) 20,20,15
   15 WRITE (6,280)
   20 IF (NREAL) 30,30,25
   25 WRITE (6,305) NUMCO(I)
      GO TO 35
   30 WRITE (6,310) NUMCO(I)
   35 CONTINUE
      IF (IEDIT(I)) 45,45,40
   40 WRITE (6,315)
   45 WRITE (6,320)
      WRAT=WCORR(I)/WINT(I)
      RSPED=CORN(I)/SPEED
      WRITE (6,325) WACT(I),WCORR(I),WINT(I),WRAT,RPM(I),CORN(I),RSPED
      WRITE (6,330) DUPTT(I),RELH(I)
      WRITE (6,335) GAMMA(I),GASK(I)
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```
      WRITE (6,340) (PCAL(I,K),K=1,NOCAJ)
      WRITE (6,345)
      NDUMJ=NOPPJ
      IF (NOPTJ-NOPPJ) 55,55,50
50    NDUMJ=NOPTJ
55    DO 80 J=1,NDUMJ
      IF (J-NOPPJ) 65,65,60
60    PLEPR(I,J)=0.
65    IF (J-NOPTJ) 75,75,70
70    TOPT(I,J)=0.
75    CORPLP=PLEPR(I,J)/FAC2
      CORPLT=TOPT(I,J)/FAC1
      WRITE (6,350) J,PLEPR(I,J),CORPLP,TOPT(I,J),CORPLT
80    CONTINUE
      WRITE (6,355) TO1(I)
      WRITE (6,360) PO1(I)
      IF (NOATM) 90,90,85
85    WRITE (6,365)
      WRITE (6,370) (J,PATM(I,J),J=1,NOATM)
      WRITE (6,295)
90    CONTINUE
      IF (JREDV) 100,100,95
95    WRITE (6,280)
100   WRITE (6,375)
      K=1
      LTAP=NTAP
105   DO 110 JK=K,LTAP
      JL=JK-LTAP+NTAP
      WRITE (6,380) JL,TORT(I,JK),TOTPR(I,JK),RAD(JL)
110   CONTINUE
      IF (JREDV) 125,125,115
115   IF (LTAP-NTAP) 120,120,125
120   K=NTAP+1
      LTAP=2*NTAP
      WRITE (6,385)
      GO TO 105
125   CONTINUE
      WRITE (6,280)
      WRITE (6,390)
      LQ=0
      K=1
      LTAP=NTAP
      DO 165 J=K,LTAP
      WRITE (6,295)
      WRITE (6,395) J,R(J),SRAD(J),PSTA(I,J)
      WRITE (6,320)
      WRITE (6,400)
      NMDUM=0
      LN=J
130   LM=J+NMDUM
      DO 135 L=1,NRAKE
      LL=LN+(L-1)*NTAP
135   WRITE (6,405) L,THETA(L),TOST(I,LL),TOSTC(I,LL),TOTPS(I,LL),TSTA(I
     1,LL),ARHO(I,LL),AMACH(I,LL),AV(I,LL)
      WRITE (6,410) TO3AV(I,LM),PO3AV(I,LM),CV(I,LM),GAMAV(I,LM),CMACH(I
     1,LM)
      IF (KREDV) 150,150,140
140   IF (NMDUM) 145,145,160
145   LN=J+NRAKE*NTAP
      NMDUM=NTAP
```

```
      WRITE (6,385)
      GO TO 130
150   IF (LQ) 155,155,160
155   LQ=LQ+1
      GO TO 165
160   WRITE (6,280)
      LQ=LQ-1
165   CONTINUE
      WRITE (6,280)
      WRITE (6,415)
      NOUWK=NOUWJ/2
      WRITE (6,420)  (K,UWALS(I,K),X1,K=1,NOUWK)
      WRITE (6,425)
      NOUWK=NOUWK+1
      WRITE (6,420)  (K,UWALS(I,K),X1,K=NOUWK,NOUWJ)
      WRITE (6,430)
      NOUWK=NOUWA/2
      WRITE (6,420)  (K,UWALA(I,K),X1A,K=1,NOUWK)
      WRITE (6,425)
      NOUWK=NOUWK+1
      WRITE (6,420)  (K,UWALA(I,K),X1A,K=NOUWK,NOUWA)
      WRITE (6,435)
      WRITE (6,420)  (K,AWALS(1,K),X(K),K=1,NOAWJ)
      WRITE (6,440)
      NOUWK=NOBWJ/2
      WRITE (6,420)  (K,BWALS(I,K),X13,K=1,NOUWK)
      WRITE (6,425)
      NOUWK=NOUWK+1
      WRITE (6,420)  (K,BWALS(I,K),X13,K=NOUWK,NOBWJ)
      WRITE (6,445)
      NODWK=NODWJ/2
      WRITE (6,420)  (K,DWALS(I,K),X2,K=1,NODWK)
      WRITE (6,425)
      NODWK=NODWK+1
      WRITE (6,420)  (K,DWALS(I,K),X2,K=NODWK,NODWJ)
      WRITE (6,450)
      WRITE (6,455)
      WRITE (6,460)
      WRITE (6,465)  (K,BLASP(I,K),K=1,NOBSJ)
      WRITE (6,470)
      WRITE (6,465)  (K,PBLAP(I,K),K=1,NOBPJ)
      WRITE (6,280)
      WRITE (6,475)
      WRITE (6,460)
      WRITE (6,465)  (K,VENPR(I,K),K=1,NOVNJ)
      WRITE (6,480)
      WRITE (6,460)
      LTAP=NTAP
      J=1
170   DO 175 K=J,LTAP
      IK=K+NTAP-LTAP
      WRITE (6,465) IK,DMXSP(I,K)
175   CONTINUE
      IF (KREDN) 190,190,180
180   IF (LTAP-NTAP) 190,185,190
185   WRITE (6,385)
      LTAP=2*NTAP
      J=NTAP+1
      GO TO 170
190   CONTINUE
```

```
      WRITE (6,485) TOLWS,PPRTL,PTTO
      CALL BADPT (NRAKE,NTAP,THETA,TOTPS,TOST,KREDN,I)
      WRITE (6,490)
      IF (NPNC4) 265,265,195
195   CONTINUE
      WRITE (7,495) NUMCO(I)
      WRITE (7,500) GASK(I),AMASS(I),WCORR(I),CORN(I),STOP,STDT
      WRITE (7,510) FAC1,FAC2
      WRITE (7,505) NTAP
      DO 205 K=1,NTAP
      TORTA(K)=TORT(I,K)
      TOPRA(K)=TOTPR(I,K)
      IF (JREDN) 200,205,200
200   JL=K+NTAP
      TORTA(K)=(TORTA(K)+TORT(I,JL))/2.
      TOPRA(K)=(TOPRA(K)+TOTPR(I,JL))/2.
205   CONTINUE
      DO 210 K=1,NTAP
      WRITE (7,510) RAD(K),TOPRA(K)
210   CONTINUE
      WRITE (7,505) NTAP
      DO 215 K=1,NTAP
      WRITE (7,510) RAD(K),TORTA(K)
215   CONTINUE
      WRITE (7,505) NTAP
      DO 225 K=1,NTAP
      P3TAV(K)=PO3AV(I,K)
      T3TAV(K)=TO3AV(I,K)
      IF (KREDN) 220,225,220
220   JL=K+NTAP
      P3TAV(K)=(P3TAV(K)+PO3AV(I,JL))/2.
      T3TAV(K)=(T3TAV(K)+TO3AV(I,JL))/2.
225   CONTINUE
      DO 250 K=1,NTAP
      IF (KREDN) 240,240,230
230   JL=K+NTAP
      IF (DMXSP(I,K)-DMXSP(I,JL)) 235,240,240
235   DMX=DMXSP(I,JL)
      GO TO 245
240   DMX=DMXSP(I,K)
245   WRITE (7,510) SRAD(K),P3TAV(K),DMX
250   CONTINUE
      WRITE (7,505) NTAP
      DO 255 K=1,NTAP
      WRITE (7,510) SRAD(K),T3TAV(K)
255   CONTINUE
      NWSO=4+NOAWJ
      WRITE (7,505) NWSO
      WRITE (7,510) X1,POWER(I,1)
      WRITE (7,510) X1A,POWER(I,4)
      DO 260 K=1,NOAWJ
      WRITE (7,510) X(K),AWALS(I,K)
260   CONTINUE
      WRITE (7,510) X1B,POWER(I,3)
      WRITE (7,510) X2,POWER(I,2)
      NWSI=4
      WRITE (7,505) NWSI
      WRITE (7,510) X1,PINER(I,1)
      WRITE (7,510) X1A,PINER(I,4)
      WRITE (7,510) X1B,PINER(I,3)
```

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      WRITE (7,510) X2,PINER(I,2)                                       OUT 241
265   CONTINUE                                                          OUT 242
      WRITE (6,515)                                                     OUT 243
      IC=NC/3                                                           OUT 244
      N=-2                                                              OUT 245
      DO 270 K=1,IC                                                     OUT 246
      N=N+3                                                             OUT 247
      N1=N+1                                                            OUT 248
      N2=N+2                                                            OUT 249
270   WRITE (6,520) IN(I,N),VOLTG(I,N),IN(I,N1),VOLTG(I,N1),IN(I,N2),VOLOUT 250
     1TG(I,N2)                                                          OUT 251
      IC=IC*3                                                           OUT 252
      IF (NC.EQ.IC+1) WRITE (6,520) IN(I,NC),VOLTG(I,NC)                OUT 253
      IF (NC.EQ.IC+2) IC1=NC-1                                          OUT 254
      IF (NC.EQ.IC+2) WRITE (6,520) IN(I,IC1),VOLTG(I,IC1),IN(I,NC),VOLTOUT 255
     1G(I,NC)                                                           OUT 256
275   CONTINUE                                                          OUT 257
      RETURN                                                            OUT 258
280   FORMAT (1H1)                                                      OUT 259
285   FORMAT (35X,51HUSAF - ARL(LF) SUPERSONIC COMPRESSOR DATA REDUCTIONOUT 260
     1)                                                                 OUT 261
290   FORMAT (/35X,50H * * * * * * * * * * * * * * * * * * * * * * * * *OUT 262
     1)                                                                 OUT 263
295   FORMAT (////)                                                     OUT 264
300   FORMAT (//51X,16HOUTPUT DATA SET ,I3,/,51X,15HNUMBER OF TESTS ,I3,OUT 265
     1/44X,19HDESIGN WHEEL SPEED ,F9.3,4H RPM,//)                       OUT 266
305   FORMAT (13H TEST NUMBER ,I12,25H ---REAL GAS CONSIDERATION)       OUT 267
310   FORMAT (13H TEST NUMBER ,I12,28H --PERFECT GAS CONSIDERATION)     OUT 268
315   FORMAT (17H (EDITED VERSION))                                     OUT 269
320   FORMAT (/,1X,22H* * * * * * * * * * * )                           OUT 270
325   FORMAT (/,20H MEASURED FLOW RATE=,F9.5,7H LB/SEC,/,21H CORRECTED FOUT 271
     1LOW RATE=,F9.5,7H LB/SEC,/,54H RADIALLY INTEGRATED FLOW RATE(STAGEOUT 272
     2 DISCHARGE PLANE)=,F9.5,7H LB/SEC,/,44H FLOW RATIO(CORRECTED FLOW/OUT 273
     3INTEGRATED FLOW)=F7.3/23H MEASURED WHEEL SPEED= ,F10.3,5H RPMS,/23OUT 274
     4H CORRECTED WHEEL SPEED=,F10.3,5H RPMS,/,23H PER CENT DESIGN SPEEDOUT 275
     5=,F5.3)                                                           OUT 276
330   FORMAT (23H DEW POINT TEMPERATURE=,F8.3,8H DEGREES,/19H RELATIVE HOUT 277
     1UMIDITY=,F6.3)                                                    OUT 278
335   FORMAT (1X,20HCALCULATED CONSTANTS,/,5X,25HSPECIFIC HEAT RATIO(MIXOUT 279
     1)=,F7.4,/,12X,13HGAS CONSTANT(MIX)=,F10.4,17H FT-LBF/ LBM-DEGR,/) OUT 280
340   FORMAT (29H CALIBRATION PRESSURES(PSIA)=,F7.4,1H,,F7.4,1H,,F7.4,1HOUT 281
     1,,F7.4,1H,,F7.4,1H,,F7.4,1H,)                                     OUT 282
345   FORMAT (//,17H 1. PLENUM DATA ,/,20X,8HPOSITION,5X,14HPRESSURE(PSIOUT 283
     1A),5X,14HCORRECTED PRES,5X,15HTEMPERATURE(DEG R),5X,14HCORRECTED TOUT 284
     2EMP,/)                                                            OUT 285
350   FORMAT (24X,I2,9X,F7.3,11X,F7.3,13X,F7.3,13X,F7.3)                OUT 286
355   FORMAT (//,15X,33HAVERAGE TEMPERATURE(ARITHMETIC)= ,F7.3,16H DEGREOUT 287
     1ES RANKINE)                                                       OUT 288
360   FORMAT (15X,31HAVERAGE PRESSURE(ARITHMETIC)= ,F7.3,5H PSIA,////)  OUT 289
365   FORMAT (40H 1A. ATMOSPHERIC PRESSURE MEASUREMENTS  ,/,20X,8HPOSITIOUT 290
     1ON,5X,14HPRESSURE(PSIA),/)                                        OUT 291
370   FORMAT (23X,I2,9X,F12.4)                                          OUT 292
375   FORMAT (37H 2. ROTOR DISCHARGE QUANTITIES(UNCORRECTED FOR SUPERSONOUT 293
     1IC MACH NO. AND RECOVERY RATIO ),//,24X,8HPOSITION,5X,17HTOTAL TEMOUT 294
     2P(DEGR),5X,17HTOTAL PRES.(PSIA),8X,10HRADIUS(IN),/)               OUT 295
380   FORMAT (28X,I2,11X,F10.3,12X,F10.3,15X,F5.3)                      OUT 296
385   FORMAT (/,12X,9HREDUNDANT,//)                                     OUT 297
390   FORMAT (30H 3. STAGE DISCHARGE QUANTITIES,/)                      OUT 298
395   FORMAT (5X,15HRADIAL POSITION,I3,/,5X,24HPERCENT ANNULUS HEIGHT= ,OUT 299
     1F4.3,/,5X,8HRADIUS= ,F6.3,4H IN.,/,5X,17HSTATIC PRESSURE= ,F7.3,5HOUT 300
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      2 PSIA,//)                                                        OUT 301
  400  FORMAT (1X,8HRAKE NO.,5X,5HTHETA,5X,10HTOTAL TEMP,5X,12HCOR TOT TEOUT 302
      1MP,2X,8HTOT PRES,5X,11HSTATIC TEMP,5X,16HDENSITY(LBM/CF) ,2X,8HMACOUT 303
      2HNO.,3X,13HVELOCITY(F/S),/)                                      OUT 304
  405  FORMAT (5X,I1,8X,F5.2,5X,F8.3,7X,F8.3,6X,F7.3,8X,F7.3,9X,F7.5,8X,FOUT 305
      17.4,6X,F7.2)                                                     OUT 306
  410  FORMAT (/,31H CIRCUMFERENTIAL MASS AVERAGES ,4X,F7.3,6H DEGR,,4X,FOUT 307
      17.3,6H PSIA,,4X,F7.2,8H FT/SEC,,4X,6HGAMMA=,F8.5,4X,9HMACH NO.=,F7OUT 308
      2.4)                                                              OUT 309
  415  FORMAT (//,25H 4. WALL STATIC PRESSURES,/,30X,12HPOSITION NO.,10X,OUT 310
      114HPRESSURE(PSIA),10X,18HAXIAL LOCATION(IN),/,10X,14HUPSTREAM,INNEOUT 311
      2R)                                                               OUT 312
  420  FORMAT (35X,I2,18X,F7.3,18X,F7.3)                                OUT 313
  425  FORMAT (19X,5HOUTER)                                             OUT 314
  430  FORMAT (10X,20HROTOR ENTRANCE,INNER)                             OUT 315
  435  FORMAT (10X,14HOPPOSITE ROTOR)                                   OUT 316
  440  FORMAT (7X,17HINTRA-STAGE,INNER)                                 OUT 317
  445  FORMAT (8X,15HDOWNSTREAM,INNER)                                  OUT 318
  450  FORMAT (//,33H 5. STATOR BLADE STATIC PRESSURES,/)               OUT 319
  455  FORMAT (16H SUCTION SURFACE,//)                                  OUT 320
  460  FORMAT (30X,12HPOSITION NO.,10X,14HPRESSURE(PSIA))               OUT 321
  465  FORMAT (35X,I2,18X,F7.3)                                         OUT 322
  470  FORMAT (//,17H PRESSURE SURFACE,//)                              OUT 323
  475  FORMAT (//,49H 6. VENTURI PRESSURES(USED TO COMPUTE FLOW RATE) ,/)OUT 324
  480  FORMAT (//,69H 7. MAXIMUM MEASURED STAGE DISCHARGE PRESSURE AT EACOUT 325
      1H RADIAL POSITION,/)                                             OUT 326
  485  FORMAT (///40X,37HTOLERANCES USED IN THESE CALCULATIONS,//,45X,12HOUT 327
      1WALL STATICS,13X,F5.3,8X,/,45X,16HPLENUM PRESSURES,9X,F5.3,8X,/,45OUT 328
      2X,19HPLENUM TEMPERATURES,6X,F5.3)                                OUT 329
  490  FORMAT (//,2X)                                                   OUT 330
  495  FORMAT (I12)                                                     OUT 331
  500  FORMAT (3F12.5,F12.3,2F12.4)                                     OUT 332
  505  FORMAT (I6)                                                      OUT 333
  510  FORMAT (5F12.4)                                                  OUT 334
  515  FORMAT (55X,15HTAPE DUMP,VOLTS,///,8H CHANNEL,5X,7HVOLTAGE,5X,7HCHOUT 335
      1ANNEL,5X,7HVOLTAGE,5X,7HCHANNEL,5X,7HVOLTAGE,/,2X)               OUT 336
  520  FORMAT (3X,I3,4X,F13.7,4X,I3,4X,F13.7,4X,I3,4X,F13.7)            OUT 337
       END                                                              OUT 338-
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```
      PROGRAM B2X
      COMMON/EXTRA/PSCALE,PLOWER,DAMPF,NSAVE,NEX
      COMMON NSTNS,NSTRMS,NMAX,NFORCE,NPRSS,NTEMP,NL,NSTN1,NSTN2,NCASE,N
     1R1,NR2,NS1,NS2,NOROTR,NOSTAT,NRP,NRT,NSP,NST,NWSO,NWSI,ICASE,LOG1,
     2LOG2,LOG3,LOG4,ITUB,IPASS,IVFAIL,IFFAIL,ILAST,NSA,IST,IRT,LNCT,IMI
     3D,NR3,NS3,NPLOT,ISTOP,IRLE,ISLE,LOG5
      COMMON NBL(24),NSPEC(24),NCALC(24),NDATA(24),NMACH(24),ISTRT1(24),
     1ISTRT2(24)
      COMMON G,EJ,GASR,FRCAIR,FLOW,RPM,PIN,TIN,PI,PRATIO,C1,RF
      COMMON TITLE(18),RSTN(200),XSTN(200),DATRAD(200),DATBET(200),DATEP
     1S(200),DATAB(200),R1M(11),RLOSS(11),TFM(21),DMPP(21),S1M(11),SLOSS
     2(11),RSA(21),SPPG(21),BDIST(24),RRP(21),PR(21),RRT(21),TR(21),RSP(
     321),PS(21),PSM(21),RST(21),TS(21),XWSO(24),WSPO(24),XWSI(24),WSPI(
     424),DELF(21),ABROTM(21),STADEV(21),ROTDEV(21),ABSTAM(21),DVMDM(21)
     5,EPS(21),DVWDM(21),TDSDM(21),GAMA(21),TANA(21),TANR(21),B1(20),CPP
     6G(21),DRDZ2(24),SA(21),B2(20),TITLE1(18),DATHET(200),T1R(21),H1R(2
     71),WR(21),WS(21),RTEMP(21),CR(21),PHI(21),DRVWDM(21),BLCKGE(24),VV
     8(21),RRO(21),RSD(21),DS(23),DR(23),RI(21),SI(21),XMR(23),XMS(23)
      COMMON R(21,24),P(21,24),T(21,24),VM(21,24),VW(21,24),RDEV(11,21),
     1SDEV(11,21),R2M(11,21),S2M(11,21)
      COMMON/COEFFS/GAS(6),EJX,GASRX
      DIMENSION AIR(6),H2O(6)
      DATA (AIR(J),J=1,6)/.25037954,-.(9081282,.23122066,-.34160919,.274
     197128,-.085548936/,(H2O(J),J=1,6)/.43483286,.1098044,-.52292623,1.
     20182121,-.79236516,.227244483/
      WRITE(LOG2,100)ICASE
  100 FORMAT(1H1,4X,32HTEST DATA PRINTOUT FOR POINT NO.,I3,/,5X,35(1H-))
      READ(LOG3,110)TITLE
  110 FORMAT(18A4)
      WRITE(LOG2,120)TITLE
  120 FORMAT(2X,/,10X,16HTEST POINT TITLE,33X,2H= ,18A4)
      READ(LOG3,130)GASR,FRCAIR,FLOW,RPM,PIN,TIN
  130 FORMAT(6F12.0)
      WRITE(LOG2,140)GASR,FRCAIR,FLOW,RPM,PIN,TIN
  140 FORMAT(2X,/,10X,12HGAS CONSTANT,37X,1H=,F8.4,/,10X,17HAIR MASS FRA
     1CTION,32X,1H=,F8.5,/,10X,8HFLOWRATE,41X,1H=,F8.4,/,10X,11HROTOR SP
     2EED,38X,1H=,F8.1,/,10X,20HINLET TOTAL PRESSURE,29X,1H=,F8.4,/,10X,
     323HINLET TOTAL TEMPERATURE,26X,1H=,F8.3)
      EJX=EJ
      GASRX=GASR
      READ(LOG3,170)TRATIO,PRATIO
      WRITE(LOG2,145)TRATIO,PRATIO
  145 FORMAT(10X,14HT IN/T IN(STD),35X,1H=,F8.5,/,10X,14HP IN/P IN(STD),
     135X,1H=,F8.5)
      LNCT=13
      READ(LOG3,190)NRP
      IF(LNCT+5+NRP.LE.NL)GO TO 160
      WRITE(LOG2,150)
  150 FORMAT(1H1)
      LNCT=1
  160 LNCT=LNCT+5+NRP
      READ(LOG3,170) (RRP(J),PR(J),J=1,NRP)
  170 FORMAT(2F12.0)
      WRITE(LOG2,180)NRP,(RRP(J),PR(J),J=1,NRP)
  180 FORMAT(2X,/,10X,29HROTOR OUTLET TOTAL PRESSURE (,I2,8H POINTS),//,
     112X,6HRADIUS,7X,8HPRESSURE,//,(4X,2F14.4))
      READ(LOG3,190)NRT
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190   FORMAT(I5)                                                           U2 1395
      IF(LNCT+5+NRT.LE.NL)GO TO 200                                        U2 1396
      WRITE(LOG2,150)                                                      U2 1397
      LNCT=1                                                               U2 1398
200   LNCT=LNCT+5+NRT                                                      U2 1399
      READ(LOG3,210) (RRT(J),TR(J),J=1,NRT)                                U2 1400
210   FORMAT(2F12.0)                                                       U2 1401
      WRITE(LOG2,220)NRT,(RRT(J),TR(J),J=1,NRT)                            U2 1402
220   FORMAT(2X,/,10X,32HROTOR OUTLET TOTAL TEMPERATURE (,I2,8H POINTS),   U2 1403
     1//,12X,6HRADIUS,6X,11HTEMPERATURE,//,(10X,F8.4,F14.3))               U2 1404
      READ(LOG3,190)NSP                                                    U2 1405
      IF(LNCT+5+NSP.LE.NL)GO TO 230                                        U2 1406
      WRITE(LOG2,150)                                                      U2 1407
      LNCT=1                                                               U2 1408
230   LNCT=LNCT+5+NSP                                                      U2 1409
      READ(LOG3,240) (RSP(J),PS(J),PSM(J),J=1,NSP)                         U2 1410
240   FORMAT(3F12.0)                                                       U2 1411
      WRITE(LOG2,250)NSP,(RSP(J),PS(J),PSM(J),J=1,NSP)                     U2 1412
250   FORMAT(2X,/,10X,30HSTAGE OUTLET TOTAL PRESSURES (,I2,8H POINTS),//   U2 1413
     1,12X,6HRADIUS,4X,9HMEAN PRES,4X,9HPEAK PRES,//,(F18.4,F12.4,F13.4)   U2 1414
     2)                                                                    U2 1415
      READ(LOG3,190)NST                                                    U2 1416
      IF(LNCT+5+NST.LE.NL)GO TO 260                                        U2 1417
      WRITE(LOG2,150)                                                      U2 1418
      LNCT=1                                                               U2 1419
260   LNCT=LNCT+5+NST                                                      U2 1420
      READ(LOG3,270) (RST(J),TS(J),J=1,NST)                                U2 1421
270   FORMAT(2F12.0)                                                       U2 1422
      WRITE(LOG2,280)NST,(RST(J),TS(J),J=1,NST)                            U2 1423
280   FORMAT(2X,/,10X,33HSTAGE OUTLET TOTAL TEMPERATURES (,I2,8H POINTS)   U2 1424
     1,//,12X,6HRADIUS,6X,11HTEMPERATURE,//,(10X,F8.4,F14.3))              U2 1425
      GO TO 283
      READ(LOG3,190)NSA                                                    U2 1426
      READ(LOG3,170) (RSA(J),SA(J),J=1,NSA)                                U2 1431
283   NSA=1
      RSA(1)=0.0
      SA(1)=0.0
      IF(LNCT+5+NSA.LT.NL)GO TO 282                                        U2 1427
      WRITE(LOG2,150)                                                      U2 1428
      LNCT=1                                                               U2 1429
282   LNCT=LNCT+NSA+5                                                      U2 1430
      WRITE(LOG2,286)NSA,(RSA(J),SA(J),J=1,NSA)                            U2 1432
286   FORMAT(/10X26HSTAGE OUTLET FLOW ANGLES (,I2,8H POINTS),//,12X,6HRA   U2 1433
     1DIUS,8X,5HANGLE,//,(F18.4,F13.3))                                    U2 1434
      READ(LOG3,190)NWSO                                                   U2 1435
      IF(NWSO.EQ.0)GO TO 315                                               U2 1436
      IF(LNCT+5+NWSO.LE.NL)GO TO 290                                       U2 1437
      WRITE(LOG2,150)                                                      U2 1438
      LNCT=1                                                               U2 1439
290   LNCT=LNCT+5+NWSO                                                     U2 1440
      READ(LOG3,300) (XWSO(J),WSPO(J),J=1,NWSO)                            U2 1441
      NWSO=NWSO+1                                                          ******
      XWSO(NWSO)=XWSO(NWSO-1)                                              ******
      WSPO(NWSO)=WSPO(NWSO-1)                                              ******
      XWSO(NWSO-1)=4.725                                                   ******
300   FORMAT(2F12.0)                                                       U2 1442
      WRITE(LOG2,310)NWSO,(XWSO(J),WSPO(J),J=1,NWSO)                       U2 1443
```

```
  310 FORMAT(2X,/,10X,25HCASING STATIC PRESSURES (,I2,8H POINTS),//,12X,  U2 1444
     17HX-COORD,6X,8HPRESSURE,//,(4X,2F14.4))                             U2 1445
  315 READ(LOG3,190)NWSI                                                  U2 1446
      IF(NWSI.EQ.0)GO TO 331                                              U2 1447
      IF(LNCT+5+NWSI.LE.NL)GO TO 320                                      U2 1448
      WRITE(LOG2,150)                                                     U2 1449
      LNCT=1                                                              U2 1450
  320 LNCT=LNCT+5+NWSI                                                    U2 1451
      READ(LOG3,300) (XWSI(J),WSPI(J),J=1,NWSI)                           U2 1452
      NWSI=NWSI+1                                                         ******
      XWSI(NWSI)=XWSI(NWSI-1)                                             ******
      WSPI(NWSI)=WSPI(NWSI-1)                                             ******
      XWSI(NWSI-1)=4.725                                                  ******
      WRITE(LOG2,330)NWSI,(XWSI(J),WSPI(J),J=1,NWSI)                      U2 1453
  330 FORMAT(2X,/,10X,22HHUB STATIC PRESSURES (,I2,8H POINTS),//,12X,7HX  U2 1454
     1-COORD,6X,8HPRESSURE,//,(4X,2F14.4))                                U2 1455
  331 READ(LOG4,332) (BLCKGE(I),BDIST(I),I=1,NSTNS)                       U2 1456
  332 FORMAT(2F12.0)                                                      U2 1457
      IF(LNCT+5+NSTNS.LE.NL)GO TO 333                                     U2 1458
      WRITE(LOG2,150)                                                     U2 1459
      LNCT=1                                                              U2 1460
  333 LNCT=LNCT+5+NSTNS                                                   U2 1461
      WRITE(LOG2,334)(I,BLCKGE(I),BDIST(I),I=1,NSTNS)                     U2 1462
  334 FORMAT(2X,/,10X,34HDISTRIBUTED BLOCKAGE SPECIFICATION,//,10X,38HST  U2 1463
     1ATION  BLOCKAGE  DISTRIBUTION FACTOR,//,(I14,F13.5,F15.4))          U2 1464
      READ(LOG4,335) (NMACH(I),I=1,NSTNS)                                 U2 1465
  335 FORMAT(12I6)                                                        U2 1466
      IF(LNCT+5.LE.NL)GO TO 336                                           U2 1467
      WRITE(LOG2,150)                                                     U2 1468
      LNCT=1                                                              U2 1469
  336 LNCT=LNCT+5                                                         U2 1470
      WRITE(LOG2,337)(I,I=1,NSTNS)                                        U2 1471
  337 FORMAT(2X,/,10X,24HSOLUTION TYPE INDICATORS,//,10X,7HSTATION,24I3)  U2 1472
      WRITE(LOG2,338)(NMACH(I),I=1,NSTNS)                                 U2 1473
  338 FORMAT(10X,5HNMACH,2X,24I3)                                         U2 1474
      DO 370 J=1,6                                                        U2 1500
  370 GAS(J)=AIR(J)*FRCAIR+H2O(J)*(1.0-FRCAIR)                            U2 1501
      IF(NSAVE.EQ.1.AND.ICASE.GT.1.AND.IVFAIL.EQ.0.AND.IFFAIL.EQ.0.AND.I
     1LAST.EQ.0)GO TO 390
      X1=RSTN(1)**2                                                       U2 1475
      L1=ISTRT1(1)+NSPEC(1)-1                                             U2 1476
      X2=RSTN(L1)**2-X1                                                   U2 1477
      X3=(RSTN(L1)-RSTN(1))/FLOAT(ITUB)                                   U2 1478
      DRDZ2(1)=(XSTN(L1)+XSTN(1))/2.0                                     U2 1479
      R(1,1)=RSTN(1)                                                      U2 1480
      DO 340 J=2,ITUB                                                     U2 1481
      R(J,1)=R(J-1,1)+X3                                                  U2 1482
  340 DELF(J)=(R(J,1)**2-X1)/X2                                           U2 1483
      R(NSTRMS,1)=RSTN(L1)                                                U2 1484
      DELF(1)=0.0                                                         U2 1485
      DELF(NSTRMS)=1.0                                                    U2 1486
      DO 350 I=2,NSTNS                                                    U2 1487
      L1=ISTRT1(I)                                                        U2 1488
      L2=L1+NSPEC(I)-1                                                    U2 1489
      DRDZ2(I)=(XSTN(L1)+XSTN(L2))/2.0                                    U2 1490
      X1=RSTN(L1)**2                                                      U2 1491
      X2=RSTN(L2)**2-X1                                                   U2 1492
```

```
      R(1,I)=RSTN(L1)
      R(NSTRMS,I)=RSTN(L2)
      DO 350 J=2,ITUB
  350 R(J,I)=SQRT(X1+DELF(J)*X2)
      DO 360 J=1,NSTRMS
      STADEV(J)=0.0
  360 ROTDEV(J)=0.0
      X1=ORDZ2(1)
      ORDZ2(1)=((R(NSTRMS,1)-R(1,1))/(ORDZ2(2)-X1))**2
      L1=NSTNS-1
      DO 380 I=2,L1
      X2=X1
      X1=ORDZ2(I)
      X3=ORDZ2(I+1)-X1
      IF(X1-X2.LT.X3) X3=X1-X2
  380 ORDZ2(I)=((R(NSTRMS,I)-R(1,I))/X3)**2
      ORDZ2(NSTNS)=((R(NSTRMS,NSTNS)-R(1,NSTNS))/(ORDZ2(NSTNS)-X1))**2
  390 CONTINUE
      END
```

5. PHASE II - PROGRAM C2

```
      OVERLAY(UDTWO,3,0)
      PROGRAM C2
      COMMON/EXTRA/PSCALE,PLOWER,DAMPF,NSAVE,NEX
      COMMON NSTNS,NSTRMS,NMAX,NFORCE,NPRSS,NTEMP,NL,NSTN1,NSTN2,NCASE,N
     1R1,NR2,NS1,NS2,NOROTR,NOSTAT,NRP,NRT,NSP,NST,NWSO,NWSI,ICASE,LOG1,
     2LOG2,LOG3,LOG4,ITUB,IPASS,IVFAIL,IFFAIL,ILAST,NSA,IST,IRT,LNCT,IMI
     3D,NR3,NS3,NPLOT,ISTOP,IRLE,ISLE,LOG5
      COMMON NBL(24),NSPEC(24),NCALC(24),NDATA(24),NMACH(24),ISTRT1(24),
     1ISTRT2(24)
      COMMON G,EJ,GASR,FRCAIR,FLOW,RPM,PIN,TIN,PI,PRATIO,C1,RF
      COMMON TITLE(18),RSTN(200),XSTN(200),DATRAD(200),DATBET(200),DATEP
     1S(200),DATAB(200),R1M(11),RLOSS(11),TFW(21),DMPP(21),S1M(11),SLOSS
     2(11),RSA(21),SPPG(21),BDIST(24),RRP(21),PR(21),RRT(21),TR(21),RSP(
     321),PS(21),PSM(21),RST(21),TS(21),XWSO(24),WSPO(24),XWSI(24),WSPI(
     424),DELF(21),ABROTM(21),STADEV(21),ROTDEV(21),AESTAM(21),DVMDM(21)
     5,EPS(21),DVMDM(21),TDSDM(21),GAMA(21),TANA(21),TANR(21),B1(20),CPP
     6G(21),DRDZ2(24),SA(21),B2(20),TITLE1(18),DATHET(200),T1R(21),H1R(2
     71),WR(21),WS(21),RTEMP(21),CR(21),PHI(21),DRVWDM(21),BLCKGE(24),VV
     8(21),RRD(21),RSD(21),DS(23),DR(23),RI(21),SI(21),XMR(23),XMS(23)
      COMMON R(21,24),P(21,24),T(21,24),VM(21,24),VW(21,24),RDEV(11,21),
     1SDEV(11,21),R2M(11,21),S2M(11,21)
      DIMENSION XX1(21),RECM(11),REC(11)
      DATA RECM/0.0,0.2,0.4,0.6,0.8,1.0,1.2,1.4,1.6,1.8,2.0/,REC/1.0,0.9
     1991,0.9978,0.9960,0.9944,0.9929,0.9919,0.9907,0.9900,0.9895,0.989/
      DO 100 I=2,NSTNS
      L1=I
      IF(NCALC(I).EQ.4)GO TO 110
  100 CONTINUE
  110 DO 120 I=L1,NSTNS
      L2=I
      IF(NCALC(I).EQ.3)GO TO 130
  120 CONTINUE
  130 IF(NPRSS.EQ.1)GO TO 150
      CALL G2(RRP,PR,NRP,R(1,NSTN1),P(1,L1),X1,NSTRMS,1,0)
      IF(IPASS.EQ.1)GO TO 155
      DO 140 J=1,NSTRMS
      IF(ABROTM(J).LE.1.0)GO TO 140
      X1=FF1(T(J,NSTN1))-(VM(J,NSTN1)**2+VW(J,NSTN1)**2)/(2.0*G*EJ)
      X1=FF2(X1)
      X1=FF3(X1)
      X2=X1+1.0
      X3=X1-1.0
      X4=ABROTM(J)**2
      P(J,L1)=P(J,L1)/(((X2*X4)/(X3*X4+2.))**(X1/X3)*(X2/(2.0*X1*X4-X3))
     1**(1.0/X3))
  140 CONTINUE
      GO TO 155
  150 CALL G2(RSP,PSM,NSP,R(1,NSTN2),P(1,L1),X1,NSTRMS,1,0)
  155 IF(NTEMP.EQ.1)GO TO 170
      CALL G2(RRT,TR,NRT,R(1,NSTN1),T(1,L1),X1,NSTRMS,1,0)
      IF(IPASS.EQ.1)GO TO 190
      CALL G2(RECM,REC,11,ABROTM,XX1,X1,NSTRMS,0,0)
      DO 160 J=1,NSTRMS
  160 T(J,L1)=T(J,L1)/(XX1(J)-(1.0-XX1(J))*((14.694444/(P(J,NSTN1)*PRATI
     1O))**0.8-1.0))
      GO TO 190
  170 CALL G2(RST,TS,NST,R(1,NSTN2),T(1,L1),X1,NSTRMS,1,0)
```

```
      IF(IPASS.EQ.1)GO TO 190
      GO TO 190
      CALL G2(RECM,REC,11,ABSTAM,XX1,X1,NSTRMS,0,0)
      DO 180 J=1,NSTRMS
  180 T(J,L1)=T(J,L1)/(XX1(J)-(1.0-XX1(J))*((14.694444/(P(J,NSTN2)*PRATI
     1O))**0.8-1.0))
  190 CALL G2(RSP,PS,NSP,R(1,NSTN2),P(1,L2),X1,NSTRMS,1,0)
      IF(IPASS.EQ.1)GO TO 210
      DO 200 J=1,NSTRMS
      IF(ABSTAM(J).LE.1.0)GO TO 200
      X1=FF1(T(J,NSTN2))-(VM(J,NSTN2)**2+VW(J,NSTN2)**2)/(2.0*G*EJ)
      X1=FF2(X1)
      X1=FF3(X1)
      X2=X1+1.0
      X3=X1-1.0
      X4=ABSTAM(J)**2
      X1=(X2*X4/(X3*X4+2.0))**(X1/X3)*(X2/(2.0*X1*X4-X3))**(1.0/X3)
      P(J,L2)=P(J,L2)/X1
      IF(NPRSS.EQ.1)P(J,L1)=P(J,L1)/X1
  200 CONTINUE
  210 X1=FF1(TIN)
      DO 220 J=1,NSTRMS
      T(J,L2)=T(J,L1)
  220 VW(J,L1)=G*EJ*(FF1(T(J,L1))-X1)/(PI*R(J,L1)*RPM)*360.0
      IRT=L1
      IST=L2
      IF(NEX.EQ.0)GO TO 340
      X2=RRT(NRT)
      CALL G2(R(1,NSTN1),T(1,L1),NSTRMS,X2,X1,X1,1,1,0)
      DO 230 JJ=1,NSTRMS
      J=NSTRMS+1-JJ
      IF(R(J,NSTN1).LE.X2)GO TO 240
      T(J,L1)=X1+(T(J,L1)-X1)/2.0
      VW(J,L1)=G*EJ*(FF1(T(J,L1))-FF1(TIN))/(PI*R(J,L1)*RPM)*360.0
  230 T(J,L2)=T(J,L1)
  240 X2=RRP(NRP)
      CALL G2(R(1,NSTN1),P(1,L1),NSTRMS,X2,X1,X1,1,1,0)
      DO 250 JJ=1,NSTRMS
      J=NSTRMS+1-JJ
      IF(R(J,NSTN1).LE.X2)GO TO 260
  250 P(J,L1)=X1+(P(J,L1)-X1)/2.0
  260 X2=RSP(NSP)
      CALL G2(R(1,NSTN2),P(1,L2),NSTRMS,X2,X1,X1,1,1,0)
      DO 270 JJ=1,NSTRMS
      J=NSTRMS+1-JJ
      IF(R(J,NSTN2).LE.X2)GO TO 280
  270 P(J,L2)=X1+(P(J,L2)-X1)/2.0
  280 IF(NEX.EQ.1)GO TO 340
      X2=RRT(1)
      CALL G2(R(1,NSTN1),T(1,L1),NSTRMS,X2,X1,X1,1,1,0)
      DO 290 J=1,NSTRMS
      IF(R(J,NSTN1).GE.X2)GO TO 300
      T(J,L1)=X1+(T(J,L1)-X1)/2.0
      VW(J,L1)=G*EJ*(FF1(T(J,L1))-FF1(TIN))/(PI*R(J,L1)*RPM)*360.0
  290 T(J,L2)=T(J,L1)
  300 X2=RRP(1)
      CALL G2(R(1,NSTN1),P(1,L1),NSTRMS,X2,X1,X1,1,1,0)
```

```
      DO 310 J=1,NSTRMS
      IF(R(J,NSTN1).GE.X2)GO TO 320
310   P(J,L1)=X1+(P(J,L1)-X1)/2.0
320   X2=RSP(1)
      CALL G2(R(1,NSTN2),P(1,L2),NSTRMS,X2,X1,X1,1,1,0)
      DO 330 J=1,NSTRMS
      IF(R(J,NSTN2).GE.X2)GO TO 340
330   P(J,L2)=X1+(P(J,L2)-X1)/2.0
340   CONTINUE
      END                                                    J2 1594
```

```
      OVERLAY(JDTWO,4,0)                                                U2 1595
      PROGRAM D2                                                        U2 1596
      COMMON/EXTRA/PSCALE,PLOWER,DAMPF,NSAVE,NEX
      COMMON NSTNS,NSTRMS,NMAX,NFORCE,NPRSS,NTEMP,NL,NSTN1,NSTN2,NCASE,N U2 1597
     1R1,NR2,NS1,NS2,NOROTR,NOSTAT,NRP,NRT,NSP,NST,NWSO,NWSI,ICASE,LOG1, U2 1598
     2LOG2,LOG3,LOG4,ITUB,IPASS,IVFAIL,IFFAIL,ILAST,NSA,IST,IRT,LNCT,IMI U2 1599
     3D,NR3,NS3,NPLOT,ISTOP,IRLE,ISLE,LOG5                              U2 1600
      COMMON NBL(24),NSPEC(24),NCALC(24),NDATA(24),NMACH(24),ISTRT1(24), U2 1601
     1ISTRT2(24)                                                        U2 1602
      COMMON G,EJ,GASR,FRCAIR,FLOW,RPM,PIN,TIN,PI,PRATIO,C1,RF          U2 1603
      COMMON TITLE(18),RSTN(200),XSTN(200),DATRAD(200),DATBET(200),DATEP U2 1604
     1S(200),DATAB(200),R1M(11),R-OSS(11),TFW(21),DMPP(21),S1M(11),SLOSS U2 1605
     2(11),RSA(21),SPPG(21),BDIST(24),RRP(21),PR(21),RRT(21),TR(21),RSP( U2 1606
     321),PS(21),PSM(21),RST(21),TS(21),XWSO(24),WSPO(24),XWSI(24),WSPI( U2 1607
     424),DELF(21),ABROTM(21),STADEV(21),ROTDEV(21),ABSTAM(21),DVMDM(21) U2 1608
     5,EPS(21),DVWDM(21),TDSDM(21),GAMA(21),TANA(21),TANR(21),B1(20),CPP U2 1609
     6G(21),DRDZ2(24),SA(21),B2(20),TITLE1(18),DATHET(200),T1R(21),H1R(2 U2 1610
     71),WR(21),WS(21),RTEMP(21),CR(21),PHI(21),DRVWDM(21),BLCKGE(24),VV U2 1611
     8(21),RRD(21),RSD(21),DS(23),DR(23),RI(21),SI(21),XMR(23),XMS(23)  U2 1612
      COMMON R(21,24),P(21,24),T(21,24),VM(21,24),VW(21,24),RDEV(11,21), U2 1613
     1SDEV(11,21),R2M(11,21),S2M(11,21)                                 U2 1614
      DIMENSION XX1(21),XX2(21),VMOLD(21),DL(20),D4DL(20),DSDL(20),DRVWD U2 1615
     1L(20),A(20),B(20)                                                 U2 1616
      ITMAX=20                                                          U2 1617
      TFW(1)=0.0                                                        U2 1618
      ISTAG=0                                                           U2 1619
      DO 70 I=1,NSTNS                                                   U2 1620
      IF(R(1,I).EQ.0.0)ISTAG=I                                          U2 1621
   70 CONTINUE                                                          U2 1622
      DO 630 I=1,NSTNS                                                  U2 1623
      DO 90 J=1,ITUB                                                    U2 1624
   90 B1(J)=0.0                                                         U2 1625
      RF=1.0                                                            U2 1626
      RF=0.5
      CALL H2(I)                                                        U2 1627
      CALL I2(0,I,DWDV,ACTFLO)                                          U2 1628
      IC1=NCALC(I)+1                                                    U2 1629
      DO 100 J=1,NSTRMS                                                 U2 1630
      IF(IPASS.EQ.1.AND.I.GT.1)VM(J,I)=(VM(1,I-1)+VM(NSTRMS,I-1))/2.0   U2 1631
      IF(I.EQ.ISTAG) VM(1,I)=0.0                                        U2 1632
  100 VV(J)=VM(J,I)                                                     U2 1633
      IF(I.EQ.1)GO TO 180                                               U2 1634
      GO TO (110,110,130,140,180),IC1                                   U2 1635
  110 DO 120 J=1,NSTRMS                                                 U2 1636
      VM(J,I)=0.0                                                       U2 1637
      IF(I.GT.ISTAG.OR.J.NE.1)VM(J,I)=VM(J,I-1)*RTEMP(J)/R(J,I)         U2 1638
      T(J,I)=T(J,I-1)                                                   U2 1639
  120 P(J,I)=P(J,I-1)                                                   U2 1640
      GO TO 180                                                         U2 1641
  130 CALL E2(0,I)                                                      U2 1642
      GO TO 180                                                         U2 1643
  140 CALL G2(RSA,SA,NSA,R(1,NSTN2),XX1,X1,NSTRMS,1,0)                  U2 1644
      IF(IPASS.GT.1)GO TO 160                                           U2 1645
      DO 150 J=1,NSTRMS                                                 U2 1646
      TANR(J)=TAN(XX1(J)/C1)                                            U2 1647
  150 VM(J,I)=TANR(J)*VV(J)                                             U2 1648
      GO TO 180                                                         U2 1649
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150   DO 170 J=1,NSTRMS
      TANR(J)=TAN(XX1(J)/C1)*R(J,NSTN2)*VM(J,NSTN2)/(R(J,I)*VV(J))
170   VW(J,I)=TANR(J)*VV(J)
180   VMAX=0.0
      VMIN=10000.0
      VMIN=2000.0
      ITER=0
      DO 185 J=1,ITUB
185   DL(J)=(R(J+1,I)-R(J,I))*SQRT(1.0+((GAMA(J)+GAMA(J+1))/2.0)**2)
190   ITER=ITER+1
      DO 200 J=1,NSTRMS
200   VMOLD(J)=VV(J)
      IF(ITER.GT.1.AND.IC1.NE.3)GO TO 230
      DO 210 J=1,NSTRMS
      XX1(J)=FF1(T(J,I))
210   XX2(J)=R(J,I)*VW(J,I)
      DO 220 J=1,ITUB
      DHDL(J)=(XX1(J+1)-XX1(J))/DL(J)*G*EJ
      DRVWDL(J)=(XX2(J+1)-XX2(J))/DL(J)*(VW(J+1,I)+VW(J,I))/(R(J+1,I)+R(
     1J,I))
220   DSDL(J)=FF4(T(J+1,I),T(J,I),P(J+1,I),P(J,I))/DL(J)*G*EJ
230   L3=1
      IF(I.EQ.ISTAG)L3=2
      DO 240 J=L3,ITUB
C     A(J)=DRVWDM(J)/VV(J)+DRVWDM(J+1)/VV(J+1)-CPPG(J)*CR(J)-CPPG(J+1)*C
C    1R(J+1)-DVMDM(J)/VV(J)-DVMDM(J+1)/VV(J+1)
      A(J)=DRVWDM(J)/VM(J,I)+DRVWDM(J+1)/VM(J+1,I)-CPPG(J)*CR(J)-CPPG(J+
     11)*CR(J+1)-DVMDM(J)/VM(J,I)-DVMDM(J+1)/VM(J+1,I)
      X1=FF1((T(J,I)+T(J+1,I))/2.0)-(((VV(J)+VV(J+1))/2.0)**2+((VW(J,I)+
     1VW(J+1,I))/2.0)**2)/(2.0*G*EJ)
      IF(X1.GT.10.0)GO TO 238
      IF(IPASS.LE.NFORCE)GO TO 236
      IF(LNCT.LT.NL)GO TO 232
      WRITE(LOG2,440)
      LNCT=1
232   LNCT=LNCT+1
      WRITE(LOG2,234)IPASS,I,J,ITER
234   FORMAT(10X,4HPASS,I3,8H STATION,I3,11H STREAMTUBE,I3,10H ITERATION
     1,I3,23H UNREAL STATIC ENTHALPY)
      IF(ITER.EQ.ITMAX.AND.ILAST.EQ.0)ILAST=I
236   X1=10.0
238   X1=FF2(X1)
240   B(J)=2.0*(DHDL(J)-X1*DSDL(J)-DRVWDL(J))+X1*(TDSDM(J)+TDSDM(J+1))*G
     1*EJ
      VV(IMID)=VV(IMID)**2
      L1=IMID+1
      DO 250 J=L1,NSTRMS
      IF(ABS(A(J-1)).LT.0.000001)GO TO 250
      X1=-DL(J-1)*A(J-1)
      IF(X1.GT.-88.0)GO TO 243
      L2=J-1
      WRITE(LOG2,241)IPASS,ITER,I,L2,X1
241   FORMAT(10X,4HPASS,I3,5H ITER,I3,2H I,I3,3H L2,I3,3H X1,E11.4)
      LNCT=LNCT+1
      X1=-88.0
243   CONTINUE
      IF(X1.LE.88.0)GO TO 248
```

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      IF(IPASS.LE.NFORCE)GO TO 246                                       U2 1697
      IF(LNCT.LT.NL)GO TO 244                                            U2 1698
      WRITE(LOG2,440)                                                    U2 1699
      LNCT=1                                                             U2 1700
  244 LNCT=LNCT+1                                                        U2 1701
      L2=J+1                                                             U2 1702
      L2=J-1
      WRITE(LOG2,245)IPASS,I,L2,ITER                                     U2 1703
  245 FORMAT(10X,4HPASS,I3,6H STATION,I3,11H STREAMTUBE,I3,10H ITERATION U2 1704
     1,I3,37H EXPONENTIAL ARGUMENT LIMITED TO 88.0)                      U2 1705
      IF(ITER.EQ.ITMAX.AND.ILAST.EQ.0)ILAST=I                            U2 1706
  246 X1=88.0                                                            U2 1707
  248 X1=EXP(X1)                                                         U2 1708
      VV(J)=VV(J-1)*X1+B(J-1)/A(J-1)*(1.0-X1)                            U2 1709
      GO TO 260                                                          U2 1710
  250 VV(J)=VV(J-1)+DL(J-1)*B(J-1)                                       U2 1711
  260 CONTINUE                                                           U2 1712
      L3=IMID                                                            U2 1713
      IF(I.EQ.ISTAG)L3=IMID-1                                            U2 1714
      DO 280 JJ=2,L3                                                     U2 1715
      J=IMID+1-JJ                                                        U2 1716
      IF(ABS(A(J)).LT.0.00001)GO TO 270                                  U2 1717
      X1=DL(J)*A(J)                                                      U2 1718
      IF(X1.GT.-88.0)GO TO 263
      WRITE(LOG2,241)IPASS,ITER,I,J,X1
      LNCT=LNCT+1
      X1=-88.0
  263 CONTINUE
      IF(X1.LE.88.0)GO TO 268                                            U2 1719
      IF(IPASS.LE.NFORCE)GO TO 266                                       U2 1720
      IF(LNCT.LT.NL)GO TO 264                                            U2 1721
      WRITE(LOG2,440)                                                    U2 1722
      LNCT=1                                                             U2 1723
  264 LNCT=LNCT+1                                                        U2 1724
      WRITE(LOG2,245)IPASS,I,J ,ITER                                     U2 1725
      IF(ITER.EQ.ITMAX.AND.ILAST.EQ.0)ILAST=I                            U2 1726
  266 X1=88.0                                                            U2 1727
  268 X1=EXP(X1)                                                         U2 1728
      VV(J)=VV(J+1)*X1+B(J)/A(J)*(1.0-X1)                                U2 1729
      GO TO 280                                                          U2 1730
  270 VV(J)=VV(J+1)-DL(J)*B(J)                                           U2 1731
  280 CONTINUE                                                           U2 1732
      DO 320 J=1,NSTRMS                                                  U2 1733
      IF(I.EQ.ISTAG.AND.J.EQ.1)GO TO 320                                 U2 1734
      IF(IC1.EQ.3.AND.I.LT.IRT)RF=1.0/(1.0-RPM*PI*R(J,I)*TANR(J)/(360.0* U2 1735
     1VMOLD(J)))                                                         U2 1736
      IF(RF.LT.0.1)RF=0.1                                                U2 1737
      IF(VV(J).LT.1.0)GO TO 290                                          U2 1738
      VV(J)=SQRT(VV(J))                                                  U2 1739
      GO TO 320                                                          U2 1740
  290 IF(IPASS.LE.NFORCE)GO TO 315                                       U2 1741
      VV(J)=SQRT(ABS(VV(J)))                                             U2 1742
      IF(LNCT.LT.NL)GO TO 300                                            U2 1743
      WRITE(LOG2,440)                                                    U2 1744
      LNCT=1                                                             U2 1745
  300 LNCT=LNCT+1                                                        U2 1746
      WRITE(LOG2,310)IPASS,I,J,ITER,VV(J)                                U2 1747
```

```
310   FORMAT(10X,4HPASS,I3,8H STATION,I3,11H STREAMLINE,I3,10H ITERATION U2 1748
     1,I3,6H VM=J*,E11.4)                                                U2 1749
      IF(ITER.EQ.ITMAX.AND.ILAST.EQ.0)ILAST=I                            U2 1750
315   VV(J)=1.0                                                          U2 1751
320   VV(J)=VMOLD(J)*(1.0-RF)+VV(J)*RF                                   U2 1752
      DO 328 J=1,NSTRMS
      X1=VV(J)/VV(IMID)
      IF(X1.LE.3.0)GO TO 328
      WRITE(LOG2,324)IPASS,I,J,ITER,X1,VV(IMID)
324   FORMAT(10X,4HPASS,I3,8H STATION,I3,11H STREAMLINE,I3,10H ITERATION
     1,I3,12H VM/VM(MID)=,F6.3,9H VM(MID)=,E10.4)
      VV(J)=VV(IMID)*3.0
328   CONTINUE
      IF(I.NE.1.AND.IC1.EQ.3)CALL E2(1,I)                                U2 1753
      IF(ITMAX.EQ.ITER)GO TO 340                                         U2 1754
      DO 330 J=1,NSTRMS                                                  U2 1755
      IF(I.EQ.ISTAG.AND.J.EQ.1)GO TO 330                                 U2 1755
      IF(ABS(VV(J)/VMOLD(J)-1.0).GT.0.005.AND.IPASS.GT.2)GO TO 130
C     IF(ABS(VV(J)/VMOLD(J)-1.0).GT.0.005)GO TO 190                      U2 1757
330   CONTINUE                                                           U2 1758
340   DWDV=0.0                                                           U2 1759
      DO 400 J=1,ITUB                                                    U2 1760
      X1=FF1((T(J,I)+T(J+1,I))/2.0)-(((VV(J)+VV(J+1))/2.0)**2+((VW(J+1,I U2 1761
     1)+VW(J,I))/2.0)**2)/(2.0*G*EJ)                                     U2 1762
      IF(X1.GT.10.0)GO TO 390                                            U2 1763
      IF(IPASS.LE.NFORCE)GO TO 380                                       U2 1764
      IF(LNCT.LT.NL)GO TO 360                                            U2 1765
      WRITE(LOG2,440)                                                    U2 1766
      LNCT=1                                                             U2 1767
350   LNCT=LNCT+1                                                        U2 1768
      WRITE(LOG2,370)IPASS,I,J,ITER                                      U2 1769
370   FORMAT(10X,4HPASS,I3,8H STATION,I3,11H STREAMTUBE,I3,10H ITERATION U2 1770
     1I3,23H STATIC ENTHALPY UNREAL)                                     U2 1771
      IF(ITER.EQ.ITMAX.AND.ILAST.EQ.0)ILAST=I                            U2 1772
380   X1=10.0                                                            U2 1773
390   X1=FF2(X1)                                                         U2 1774
      X2=(T(J,I)+T(J+1,I))/2.0                                           U2 1775
      X3=FF5(X1,X2)                                                      U2 1775
      X4=(VV(J)+VV(J+1))/2.0                                             U2 1777
      X5=X4*X4/(FF3(X1)*G*GASR*X1)                                       U2 1778
      IF(IC1.EQ.3)X5=X5*(1.0+((TANR(J)+TANR(J+1))/2.0)**2)               U2 1779
      X6=X4*(CPPG(J)+CPPG(J+1))*DL(J)*(R(J+1,I)+R(J,I))*PI*(1.0-B1(J)-B2 U2 1780
     1(J))*(P(J+1,I)+P(J,I))/(X1*GASR*4.0)*X3                            U2 1781
      TFW(J+1)=TFW(J)+X6                                                 U2 1782
400   DWDV=DWDV+X6*(1.0-X5)                                              U2 1783
      ACTFLO=TFW(NSTRMS)                                                 U2 1784
      IF(DWDV.LE.0.0)GO TO 420                                           U2 1785
      IF(NMACH(I).EQ.1)GO TO 480                                         U2 1786
      IF(ACTFLO.LT.FLOW)VMAX=VV(IMID)                                    U2 1787
410   DELTAV=(FLOW-ACTFLO)/DWDV*VV(IMID)                                 U2 1788
      IF(DELTAV.LT.-0.1*VV(IMID))DELTAV=-0.1*VV(IMID)                    U2 1789
      IF(DELTAV.GT. 0.1*VV(IMID))DELTAV= 0.1*VV(IMID)                    U2 1790
C     IF(VV(IMID)+DELTAV.GT.VMIN)DELTAV=0.98*(VMIN-VV(IMID))             U2 1791
C     IF(VV(IMID)+DELTAV.LT.VMAX)DELTAV=0.98*(VMAX-VV(IMID))             U2 1792
      IF(VV(IMID)+DELTAV.GT.VMIN)DELTAV=0.80*(VMIN-VV(IMID))
      IF(VV(IMID)+DELTAV.LT.VMAX)DELTAV=0.80*(VMAX-VV(IMID))
      GO TO 510                                                          U2 1793
```

```
420    IF(NMACH(I).EQ.0)GO TO 430
       IF(ACTFLO.LT.FLOW)VMIN=VV(IMID)
       GO TO 410
430    IF(IPASS.LE.NFORCE)GO TO 470
       IF(LNCT.LT.NL)GO TO 450
       WRITE(LOG2,440)
440    FORMAT(1H1)
       LNCT=1
450    LNCT=LNCT+1
       WRITE(LOG2,460)IPASS,I,ITER
460    FORMAT(10X,4HPASS,I3,8H STATION,I3,10H ITERATION,I3,27H CONTINUITY
      1 SWITCH REQUIRED)
       IF(ITER.EQ.ITMAX.AND.ILAST.EQ.0)ILAST=I
470    IF(VV(IMID).LT.VMIN)VMIN=VV(IMID)
       DELTAV=-0.1*VV(IMID)
       IF(VV(IMID)+DELTAV.LT.VMAX)DELTAV=VMAX-VV(IMID)+(VMIN-VMAX)/50.0
       GO TO 510
480    IF(IPASS.LE.NFORCE)GO TO 500
       IF(LNCT.LT.NL)GO TO 490
       WRITE(LOG2,440)
       LNCT=1
490    LNCT=LNCT+1
       WRITE(LOG2,460)IPASS,I,ITER
       IF(ITER.EQ.ITMAX.AND.ILAST.EQ.0)ILAST=I
500    IF(VV(IMID).GT.VMAX)VMAX=VV(IMID)
       DELTAV=0.1*VV(IMID)
       IF(VV(IMID)+DELTAV.GT.VMIN)DELTAV=VMIN-VV(IMID)-(VMIN-VMAX)/50.0
510    DO 520 J=1,NSTRMS
       IF(I.EQ.ISTAG.AND.J.EQ.1)GO TO 520
       VV(J)=VV(J)+DELTAV
       IF(VV(J).LT.1.0)VV(J)=1.0
520    CONTINUE
       IF(ABS(ACTFLO/FLOW-1.0).GT.0.00025.OR.(DHDV.LE.0.0.AND.NMACH(I).EQ
      1.0).OR.(DHDV.GT.0.0.AND.NMACH(I).EQ.1))GO TO 540
       DO 530 J=1,NSTRMS
       IF(I.EQ.ISTAG.AND.J.EQ.1)GO TO 530
       IF(ABS(VV(J)/VMOLD(J)-1.0).GT.0.00025)GO TO 540
530    CONTINUE
       GO TO 580
540    IF(ITER.GE.ITMAX)GO TO 550
       IF(I.EQ.1.OR.IC1.NE.3)GO TO 190
       CALL E2(1,I)
       GO TO 190
550    IF(IPASS.LE.NFORCE)GO TO 580
       IF(LNCT.LE.NL)GO TO 560
       WRITE(LOG2,440)
       LNCT=1
560    LNCT=LNCT+1
       X1=ACTFLO/FLOW
       X2=VMOLD(1)/VV(1)
       X3=VMOLD(NSTRMS)/VV(NSTRMS)
       WRITE(LOG2,570)IPASS,I,X1,X2,X3
570    FORMAT(10X,4HPASS,I3,8H STATION,I3,35H UNCONVERGED  FLOW/SPECIFIED
      1 FLOW =,F8.5,16H VOLD/VNEW(HUB)=,F8.5,17H VOLD/VNEW(CASE)=,F8.5)
580    IF(I.EQ.NSTNS)GO TO 600
       IF(NCALC(I+1).LE.1.OR.IC1.GT.2)GO TO 600
       X2=0.0
```

```
      DO 581 II=I,NSTNS                                                 U2 1851
      IF(NCALC(II).EQ.3)GO TO 583                                       U2 1852
      IF(NCALC(II).EQ.4)GO TO 582                                       U2 1853
  581 CONTINUE                                                          U2 1854
  582 X2=RPM*PI/360.0                                                   U2 1855
  583 DO 590 J=1,NSTRMS                                                 U2 1856
      X1=FF1(T(J,I))-(VV(J)**2+VW(J,I)**2)/(2.0*G*EJ)                   U2 1857
      IF(X1.GT.0.1*TIN)GO TO 5838
      WRITE(LOG2,5832)IPASS,ITER,I,J,X1
 5832 FORMAT(10X,4HPASS,I3,5H ITER,I3,2H I,I3,2H J,I3,3H X1,E11.4)
      X1=0.1*TIN
      LNCT=LNCT+1
 5838 CONTINUE
      H1R(J)=X1+(VV(J)**2+(X2*R(J,I)-VW(J,I))**2)/(2.0*G*EJ)            U2 1858
      T1R(J)=FF2(H1R(J))                                                U2 1859
      X1=FF2(X1)                                                        U2 1860
      OMPP(J)=1.0-FF5(X1,T1R(J))                                        U2 1861
      IF(X2.EQ.0.0)GO TO 584                                            U2*1862
      X1=H1R(J)-(X2*R(J,I))**2/(2.0*G*EJ)*(1.0-(R(J,IRT)/R(J,I))**2)    U2 1863
      X1=FF2(X1)                                                        U2 1864
      X1=FF5(T1R(J),X1)                                                 U2 1865
      X3=FF5(T(J,IRT),T(J,I))                                           U2 1866
      X3=P(J,IRT)/(P(J,I)*X3)                                           U2 1867
      WR(J)=(1.0-X3)/(X1*OMPP(J))                                       U2 1868
      GO TO 590                                                         U2 1869
  584 WS(J)=(1.0-P(J,IST)/P(J,I))/OMPP(J)                               U2 1870
  590 CONTINUE                                                          U2 1871
  600 IF(IC1.NE.4.OR.NOSTAT.EQ.0)GO TO 602                              U2 1872
      DO 601 J=1,NSTRMS                                                 U2 1873
  601 STADEV(J)=(ATAN(VW(J,I)/VV(J))-ATAN(TANA(J)))*C1                  U2 1874
  602 IF(IC1.NE.5.OR.NOROTR.EQ.0)GO TO 604                              U2 1875
      X1=RPM*PI/360.0                                                   U2 1876
      DO 603 J=1,NSTRMS                                                 U2 1877
  603 ROTDEV(J)=(ATAN((VW(J,I)-X1*R(J,I))/VV(J))-ATAN(TANA(J)))*C1      U2 1878
  604 IF(I.NE.NSTN1.AND.I.NE.NSTN2)GO TO 606                            U2 1879
      DO 605 J=1,NSTRMS                                                 U2 1880
      X2=VW(J,I)**2+VV(J)**2                                            U2 1881
      X1=FF1(T(J,I))-X2/(2.0*G*EJ)                                      U2 1882
      IF(X1.LT.10.0) X1=10.0                                            U2 1883
      X1=FF2(X1)                                                        U2 1884
      ABSTAM(J)=SQRT(X2/(G*GASR*X1*FF3(X1)))                            U2 1885
      IF(I.EQ.NSTN1) ABROTM(J)=ABSTAM(J)                                U2 1886
  605 CONTINUE                                                          U2 1887
  606 DO 610 J=1,NSTRMS                                                 U2 1888
      IF(I.EQ.ISTAG.AND.J.EQ.1)GO TO 608                                U2 1889
      IF(ABS(VV(J)/VM(J,I)-1.0).GT.0.001)IVFAIL=IVFAIL+1                U2 1890
  608 TFW(J)=TFW(J)/ACTFLO                                              U2 1891
      IF(ABS(TFW(J)-DELF(J)).GT.0.001)IFFAIL=IFFAIL+1                   U2 1892
      VM(J,I)=VV(J)                                                     U2 1893
  610 RTEMP(J)=R(J,I)                                                   U2 1894
      X1=DWDV/ACTFLO                                                    U2 1895
      IF(X1.LT.0.5)X1=0.5                                               U2 1896
C     X1=1.0/(1.0+DROZ2(I)*X1/8.0)                                      U2 1897
      X2=8.0
      IF(DAMPF.NE.0.0)X2=DAMPF
      X1=1.0/(1.0+DROZ2(I)*X1/X2)
      CALL G2(TFW,RTEMP,NSTRMS,DELF,XX1,X2,ITUB,1,0)                    U2 1898
```

```
      DO 620 J=2,ITUB                                                   U2 1899
620   R(J,I)=RTEMP(J)+(XX1(J)-RTEMP(J))*X1                              U2 1900
      IF(ILAST.NE.0.AND.IPASS.GT.NFORCE)GO TO 640                       U2 1901
      IF(NBL(I).EQ.1.AND.IPASS.GT.2)CALL I2(1,I,DWDV,ACTFLO)
C     IF(NBL(I).EQ.1)CALL I2(1,I,DWDV,ACTFLO)                           U2 1902
630   CONTINUE                                                          U2 1903
640   CONTINUE                                                          U2 1904
      END                                                               U2 1905
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APPENDIX D

RAW EXPERIMENTAL DATA

This appendix presents a listing of the experimental data after being dumped from magnetic tape onto computer cards. The first two ten-character "words" of each test contain the test identification number.

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1. Test 208180106840

208	180106840000000057	0+00194460000000058	0+00280460000000059	0+0000126
0000000060	0+00124260000000061	0+00123560000000062	0+00124360000000063	0+0012486
0000000064	0+00193060000000065	0+00190660000000066	0+00188660000000067	0+0018666
0000000068	0+00190460000000069	0+00186260000000070	0+00188360000000071	0+0018636
0000000072	0+00189360000000073	0+00187560000000074	0+00191660000000075	0+0019756
0000000076	0+00193760000000077	0+00192460000000078	0+00195060000000079	0+0019776
0000000080	0+00193060000000081	0+00197360000000082	0+00192760000000083	0+0019396
0000000084	0+00190460000000085	0+00193060000000086	0+00191760000000087	0+0019136
0000000088	0+00190060000000089	0+00186660000000090	0+00193460000000091	0+0019166
0000000092	0+00189660000000093	0+00191260000000094	0+00187260000000095	0+0775706
0000000096	0+00188360000000097	0+00191560000000098	0+00190160000000099	0F0008383
0000000101	0+01715360000000201	0+01798560000000301	0-00741860000000401	0+0017986
0000000103	0+01664160000000203	0+01746160000000303	0-00741860000000403	0+0014576
0000000105	0+01713360000000205	0+01796460000000305	0-00832160000000405	0+0014436
0000000107	0+01632760000000207	0+01712960000000307	0-00778060000000407	0+0015776
0000000109	0+01594660000000209	0+01605060000000309	0-00761260000000409	0+0014596
0000000111	0+01601860000000211	0+01591960000000311	0-00645460000000411	0+0018896
0000000113	0+01603660000000213	0+01690260000000313	0-00644460000000413	0+0014636
0000000115	0+01621060000000215	0+01690460000000315	0-00644060000000415	0+0015496
0000000117	0+01652160000000217	0+01686160000000317	0-00645360000000417	0+0015156
0000000119	0+01709260000000219	0+01586360000000319	0-00643360000000419	0+0015336
0000000121	0+01672860000000221	0+01783660000000321	0-00645060000000421	0+0019216
0000000123	0+01687360000000223	0+01777260000000323	0-00643560000000423	0+0016036
0000000125	0+01704760000000225	0+01740760000000325	0-00645860000000425	0+0015146
0000000127	0+01716660000000227	0+01738860000000327	0-00645160000000427	0+0016016
0000000129	0+01723460000000229	0+01747560000000329	0-00646160000000429	0+0015886
0000000131	0+01314660000000231	0+01720460000000331	0-00658560000000431	0+0018416
0000000133	0+01179860000000233	0+01715760000000333	0-00690960000000433	0+0016646
0000000135	0+01183660000000235	0+01731460000000335	0-00688260000000435	0+0014416
0000000137	0+01289460000000237	0+01744760000000337	0-00668860000000437	0+0017316
0000000139	0+01491260000000239	0+01731760000000339	0-00697660000000439	0+0015776
0000000141	0+01715460000000241	0+01798260000000341	0-00741860000000441	0+0009796
0000000143	0+01715560000000243	0+01798160000000343	0-00741860000000443	0+0009786
0000000145	0+03539560000000245	0+03661960000000345	0-00061260000000445	0+0078476
0000000147	0+05387360000000247	0+05544160000000347	0+00627560000000447	0+0147956

2. Test 208180215840

208	1802158400000000057	0+0019926000000000058	0+0027776000000000059	0+0000126
0000000060	0+0012396000000000061	0+0012316000000000062	0+0012396000000000063	0+0012446
0000000064	0+0021536000000000065	0+0021356000000000066	0+0020726000000000067	0+0020536
0000000068	0+0020456000000000069	0+0020126000000000070	0+0019956000000000071	0+0019726
0000000072	0+0019786000000000073	0+0019616000000000074	0+0021156000000000075	0+0021016
0000000076	0+0020146000000000077	0+0020636000000000078	0+0021246000000000079	0+0021686
0000000080	0+0020626000000000081	0+0021526000000000082	0+0020416000000000083	0+0021056
0000000084	0+0020446000000000085	0+0020396000000000086	0+0021076000000000087	0+0020936
0000000088	0+0020856000000000089	0+0020096000000000090	0+0020076000000000091	0+0020826
0000000092	0+0019806000000000093	0+0020636000000000094	0+0019976000000000095	0+0531196
0000000096	0+0020296000000000097	0+0019876000000000098	0+0020386000000000099	0F0008373
0000000101	0+0171556000000000201	0+0179856000000000301	0-0074186000000000402	0-0055656
0000000103	0+0168266000000000203	0+0175486000000000303	0-0074196000000000404	0-0054846
0000000105	0+0171416000000000205	0+0179686000000000305	0-0068816000000000405	0-0054666
0000000107	0+0166526000000000207	0+0174706000000000307	0-0067546000000000408	0-0053806
0000000109	0+0163756000000000209	0+0190236000000000309	0-0067076000000000410	0-0054366
0000000111	0+0165296000000000211	0+0190895000000000311	0-0061986000000000412	0-0054176
0000000113	0+0164806000000000213	0+0173236000000000313	0-0061926000000000414	0-0053736
0000000115	0+0168856000000000215	0+0173266000000000315	0-0061946000000000415	0-0053546
0000000117	0+0174536000000000217	0+0173046000000000317	0-0061996000000000418	0-0053526
0000000119	0+0172126000000000219	0+0173046000000000319	0-0061536000000000420	0-0054236
0000000121	0+0178916000000000221	0+0188306000000000321	0-0061596000000000422	0-0053816
0000000123	0+0180316000000000223	0+0187376000000000323	0-0061526000000000424	0-0053396
0000000125	0+0181376000000000225	0+0198156000000000325	0-0061536000000000426	0-0053686
0000000127	0+0181756000000000227	0+0197775000000000327	0-0061586000000000428	0-0053366
0000000129	0+0181956000000000229	0+0198516000000000329	0-0061566000000000430	0-0054146
0000000131	0+0160176000000000231	0+0197276000000000331	0-0062486000000000432	0-0053756
0000000133	0+0162066000000000233	0+0195296000000000333	0-0061796000000000434	0-0053836
0000000135	0+0167826000000000235	0+0197306000000000335	0-0063126000000000436	0-0053766
0000000137	0+0172346000000000237	0+0193366000000000337	0-0061926000000000438	0-0053686
0000000139	0+0180186000000000239	0+0197886000000000739	0-0053616000000000440	0-0054266
0000000141	0+0171546000000000241	0+0179826000000000341	0-0074196000000000442	0-0053986
0000000143	0+0171566000000000243	0+0179916000000000343	0-0074206000000000444	0-0053786
0000000145	0+0354006000000000245	0+0366136000000000345	0-0006136000000000446	0-0052806
0000000147	0+0538936000000000247	0+0554436000000000347	0+0062746000000000448	0-0053506

3. Test 208180315240

208	1803152400000000057	0+0019776000000058	0+0027826000000059	0+0000126
0000000060	0+0012456000000061	0+0012376000000062	0+0012455000000063	0+0012516
0000000064	0+0021076000000065	0+0020826000000066	0+0020276000000067	0+0020126
0000000068	0+0020316000000069	0+0019976000000070	0+0019896000000071	0+0019716
0000000072	0+0019806000000073	0+0019655000000074	0+0020756000000075	0+0020946
0000000076	0+0020036000000077	0+0020626000000078	0+0021016000000079	0+0021366
0000000080	0+0020576000000081	0+0021236000000082	0+0020346000000083	0+0020936
0000000084	0+0019986000000085	0+0020296000000086	0+0020756000000087	0+0020416
0000000088	0+0020646000000089	0+0019826000000090	0+0019886000000091	0+0020496
0000000092	0+0019676000000093	0+0020296000000094	0+0019866000000095	0+0435056
0000000096	0+0020096000000097	0+0019776000000098	0+0020016000000099	0F0008393
0000000101	0+0171556000000201	0+0179886000000301	0-0074206000000401	0+0021266
0000000103	0+0167896000000203	0+0175106000000303	0-0074206000000403	0+0021766
0000000105	0+0171386000000205	0+0179726000000305	0-0070366000000405	0+0019506
0000000107	0+0165726000000207	0+0173926000000307	0-0068856000000407	0+0021856
0000000109	0+0162746000000209	0+0186446000000309	0-0068286000000409	0+0020436
0000000111	0+0164106000000211	0+0185706000000311	0-0062606000000411	0+0021316
0000000113	0+0164226000000213	0+0172296000000313	0-0062605000000413	0+0021406
0000000115	0+0167366000000215	0+0172286000000315	0-0062106000000415	0+0019336
0000000117	0+0172776000000217	0+0171996000000317	0-0062256000000417	0+0021736
0000000119	0+0171906000000219	0+0172036000000319	0-0061706000000419	0+0020196
0000000121	0+0176886000000221	0+0185516000000321	0-0061776000000421	0+0020976
0000000123	0+0178206000000223	0+0185896000000323	0-0061826000000423	0+0021366
0000000125	0+0179426000000225	0+0194856000000325	0-0061826000000425	0+0019506
0000000127	0+0179976000000227	0+0194586000000327	0-0061846000000427	0+0021356
0000000129	0+0180246000000229	0+0195416000000329	0-0061826000000429	0+0020546
0000000131	0+0155316000000231	0+0193956000000331	0-0062616000000431	0+0020586
0000000133	0+0155566000000233	0+0192836000000333	0-0062146000000433	0+0020806
0000000135	0+0160836000000235	0+0193995000000335	0-0063706000000435	0+0019376
0000000137	0+0165806000000237	0+0195206000000337	0-0062286000000437	0+0020816
0000000139	0+0175166000000239	0+0194626000000339	0-0064246000000439	0+0020516
0000000141	0+0171556000000241	0+0179876000000341	0-0074206000000441	0+0009786
0000000143	0+0171556000000243	0+0179866000000343	0-0074206000000443	0+0009786
0000000145	0+0354046000000245	0+0366336000000345	0-0006156000000445	0+0078456
0000000147	0+0538836000000247	0+0554736000000347	0+0062746000000447	0+0147986

4. Test 208180415840

208	1804158400000000057	0+00200160000000058	0+00277350000000059	0+0000136
0000000060	0+00124560000000061	0+00123860000000062	0+00124760000000063	0+0012526
0000000064	0+00217360000000065	0+00215260000000066	0+00208760000000067	0+0020636
0000000068	0+00205660000000069	0+00201960000000070	0+00200160000000071	0+0019796
0000000072	0+00198460000000073	0+00196650000000074	0+00212260000000075	0+0021036
0000000076	0+00202360000000077	0+00207060000000078	0+00213160000000079	0+0021786
0000000080	0+00206660000000081	0+00216260000000082	0+00204760000000083	0+0021116
0000000084	0+00205560000000085	0+00204660000000086	0+00211860000000087	0+0021056
0000000088	0+00209360000000089	0+00201950000000090	0+00201660000000091	0+0020916
0000000092	0+00198750000000093	0+00207350000000094	0+00200560000000095	0+0375456
0000000096	0+00204360000000097	0+00199450000000098	0+00204860000000099	0F0008383
0000000101	0+01715560000000201	0+01739060000000301	0-00742160000000401	0+0021086
0000000103	0+01683560000000203	0+01756960000000303	0-00742160000000403	0+0022096
0000000105	0+01714260000000205	0+01797660000000305	0-00687160000000405	0+0020256
0000000107	0+01666360000000207	0+01748360000000307	0-00674660000000407	0+0022036
0000000109	0+01638760000000209	0+01906260000000309	0-00670060000000409	0+0020986
0000000111	0+01654360000000211	0+01912560000000311	0-00619560000000411	0+0020956
0000000113	0+01649850000000213	0+01734160000000313	0-00619360000000413	0+0021756
0000000115	0+01589660000000215	0+01734260000000315	0-00620360000000415	0+0020086
0000000117	0+01745860000000217	0+01732560000000317	0-00620650000000417	0+0021826
0000000119	0+01721360000000219	0+01732360000000319	0-00615860000000419	0+0021016
0000000121	0+01790660000000221	0+01885360000000321	0-00616760000000421	0+0020766
0000000123	0+01805160000000223	0+01875260000000323	0-00615760000000423	0+0021656
0000000125	0+01814960000000225	0+01984560000000325	0-00616260000000425	0+0020196
0000000127	0+01819060000000227	0+01980860000000327	0-00616160000000427	0+0021666
0000000129	0+01820950000000229	0+01988460000000329	0-00615960000000429	0+0021286
0000000131	0+01607160000000231	0+01975660000000331	0-00625760000000431	0+0020886
0000000133	0+01627650000000233	0+01965860000000333	0-00618960000000433	0+0021536
0000000135	0+01685760000000235	0+01975860000000335	0-00632260000000435	0+0020196
0000000137	0+01730160000000237	0+01986360000000337	0-00619660000000437	0+0021666
0000000139	0+01806060000000239	0+01981560000000339	0-00636460000000439	0+0021396
0000000141	0+01715560000000241	0+01798960000000341	0-00742160000000441	0+0009786
0000000143	0+01715760000000243	0+01798960000000343	0-00742160000000443	0+0009796
0000000145	0+03541060000000245	0+03664560000000345	0-00061360000000445	0+0078476
0000000147	0+05388560000000247	0+05545760000000347	0+00627360000000447	0+0148006

5. Test 208180514040

208	18051404000000057	0+00196260000000058	0+00277960000000059	0+0000136
0000000060	0+00125060000000061	0+00124460000000062	0+00125260000000063	0+0012576
0000000064	0+00202350000000065	0+00200360000000066	0+00198460000000067	0+0019666
0000000068	0+00200760000000069	0+00196660000000070	0+00197760000000071	0+0019546
0000000072	0+00196860000000073	0+00194960000000074	0+00203360000000075	0+0020516
0000000076	0+00197660000000077	0+00203160000000078	0+00205560000000079	0+0020866
0000000080	0+00202260000000081	0+00206560000000082	0+00199760000000083	0+0020426
0000000084	0+00197360000000085	0+00199660000000086	0+00200560000000087	0+0019986
0000000088	0+00198760000000089	0+00196060000000090	0+00196260000000091	0+0020116
0000000092	0+00194360000000093	0+00198060000000094	0+00195660000000095	0+0367236
0000000096	0+00200060000000097	0+00195560000000098	0+00198160000000099	0F0008383
0000000101	0+01715660000000201	0+01799260000000301	0-00742260000000401	0+0020426
0000000103	0+01673760000000203	0+01756960000000303	0-00742360000000403	0+0019786
0000000105	0+01714160000000205	0+01797460000000305	0-00732660000000405	0+0017936
0000000107	0+01645760000000207	0+01727860000000307	0-00713060000000407	0+0020436
0000000109	0+01613260000000209	0+01793860000000309	0-00705360000000409	0+0018956
0000000111	0+01624460000000211	0+01789960000000311	0-00634060000000411	0+0020746
0000000113	0+01627760000000213	0+01708860000000313	0-00635060000000413	0+0019486
0000000115	0+01656760000000215	0+01708860000000315	0-00629060000000415	0+0017976
0000000117	0+01698160000000217	0+01705360000000317	0-00630060000000417	0+0020806
0000000119	0+01715860000000219	0+01705660000000319	0-00626260000000419	0+0018416
0000000121	0+01732460000000221	0+01833260000000321	0-00626760000000421	0+0020756
0000000123	0+01745960000000223	0+01829360000000323	0-00626860000000423	0+0020196
0000000125	0+01759160000000225	0+01888160000000325	0-00627560000000425	0+0018256
0000000127	0+01769160000000227	0+01886260000000327	0-00627160000000427	0+0020706
0000000129	0+01774060000000229	0+01894960000000329	0-00628060000000429	0+0018946
0000000131	0+01476460000000231	0+01877060000000331	0-00635560000000431	0+0019586
0000000133	0+01449860000000233	0+01856350000000333	0-00633660000000433	0+0019586
0000000135	0+01496160000000235	0+01879560000000335	0-00655660000000435	0+0018006
0000000137	0+01554360000000237	0+01892160000000337	0-00634060000000437	0+0019446
0000000139	0+01671660000000239	0+01884360000000339	0-00655460000000439	0+0018916
0000000141	0+01715760000000241	0+01799060000000341	0-00742260000000441	0+0009786
0000000143	0+01715860000000243	0+01799060000000343	0-00742360000000443	0+0009786
0000000145	0+03540660000000245	0+03654160000000345	0-00061460000000445	0+0078486
0000000147	0+05389760000000247	0+05548060000000347	0+00627460000000447	0+0148016

6. Test 208180612740

208	180612740000000057	0+00196560000000058	0+00277360000000059	0+0000126
0000000060	0+00124560000000061	0+00123960000000062	0+00124760000000063	0+0012526
0000000064	0+00199060000000065	0+00196760000000066	0+00194960000000067	0+0019306
0000000068	0+00196760000000069	0+00192360000000070	0+00193360000000071	0+0019116
0000000072	0+00193560000000073	0+00191760000000074	0+00198760000000075	0+0020166
0000000076	0+00195160000000077	0+00198260000000078	0+00201160000000079	0+0020376
0000000080	0+00195560000000081	0+00202460000000082	0+00196060000000083	0+0019946
0000000084	0+00195560000000085	0+00193960000000086	0+00198360000000087	0+0019766
0000000088	0+00195560000000089	0+00193260000000090	0+00194060000000091	0+0019756
0000000092	0+00191760000000093	0+00194960000000094	0+00192660000000095	0+0396326
0000000096	0+00197960000000097	0+00193060000000098	0+00197860000000099	0F0008383
0000000101	0+01715960000000201	0+01799360000000301	0-00742260000000401	0+0019626
0000000103	0+01669460000000203	0+01752860000000303	0-00742260000000403	0+0017986
0000000105	0+01713960000000205	0+01737560000000305	0-00759560000000405	0+0016676
0000000107	0+01640560000000207	0+01722460000000307	0-00733360000000407	0+0018396
0000000109	0+01506360000000209	0+01735760000000309	0-00723060000000409	0+0017336
0000000111	0+01615060000000211	0+01728860000000311	0-00637560000000411	0+0019956
0000000113	0+01618560000000213	0+01702160000000313	0-00636960000000413	0+0018656
0000000115	0+01652660000000215	0+01701760000000315	0-00634360000000415	0+0017276
0000000117	0+01677960000000217	0+01699060000000317	0-00634760000000417	0+0018276
0000000119	0+01714060000000219	0+01698260000000319	0-00634560000000419	0+0018016
0000000121	0+01709160000000221	0+01815460000000321	0-00635360000000421	0+0020446
0000000123	0+01724160000000223	0+01809660000000323	0-00633860000000423	0+0019636
0000000125	0+01737360000000225	0+01841360000000325	0-00634160000000425	0+0017336
0000000127	0+01749060000000227	0+01838760000000327	0-00635960000000427	0+0019636
0000000129	0+01756760000000229	0+01847960000000329	0-00635860000000429	0+0018146
0000000131	0+01415860000000231	0+01826960000000331	0-00641460000000431	0+0019156
0000000133	0+01360160000000233	0+01818660000000333	0-00651460000000433	0+0019176
0000000135	0+01398160000000235	0+01831760000000335	0-00669260000000435	0+0016896
0000000137	0+01467160000000237	0+01844660000000337	0-00645760000000437	0+0019116
0000000139	0+01607760000000239	0+01835560000000339	0-00668160000000439	0+0017616
0000000141	0+01715860000000241	0+01739160000000341	0-00742260000000441	0+0009806
0000000143	0+01715860000000243	0+01739260000000343	0-00742260000000443	0+0009796
0000000145	0+03540960000000245	0+03664560000000345	0-00061360000000445	0+0078476
0000000147	0+05389460000000247	0+05546560000000347	0+00627660000000447	0+0148056

7. Test 208180711240

208	1807112400000000057	0+0019606000000058	0+0027686000000059	0+0000126
0000000060	0+0012426000000061	0+0012366000000062	0+0012436000000063	0+0012486
0000000064	0+0019566000000065	0+0019316000000066	0+0019156000000067	0+0018946
0000000068	0+0019306000000069	0+0018896000000070	0+0019096000000071	0+0018906
0000000072	0+0019146000000073	0+0018986000000074	0+0019496000000075	0+0019856
0000000076	0+0019426000000077	0+0019506000000078	0+0019806000000079	0+0020086
0000000080	0+0019406000000081	0+0019906000000082	0+0019406000000083	0+0019626
0000000084	0+0019316000000085	0+0019386000000086	0+0019476000000087	0+0019476
0000000088	0+0019286000000089	0+0019026000000090	0+0019416000000091	0+0019566
0000000092	0+0019056000000093	0+0019326000000094	0+0019026000000095	0+0355026
0000000096	0+0019386000000097	0+0019156000000098	0+0019476000000099	0F0008383
0000000101	0+0171596000000201	0+0179956000000301	0-0074226000000401	0+0018886
0000000103	0+0166796000000203	0+0174936000000303	0-0074226000000403	0+0016366
0000000105	0+0171426000000205	0+0179756000000305	0-0078846000000405	0+0015796
0000000107	0+0163676000000207	0+0171926000000307	0-0075216000000407	0+0017376
0000000109	0+0160136000000209	0+0165216000000309	0-0073936000000409	0+0016346
0000000111	0+0160946000000211	0+0167246000000311	0-0064126000000411	0+0019716
0000000113	0+0161206000000213	0+0169746000000313	0-0064126000000413	0+0016546
0000000115	0+0163906000000215	0+0169746000000315	0-0063916000000415	0+0016796
0000000117	0+0166756000000217	0+0169306000000317	0-0064036000000417	0+0016776
0000000119	0+0171196000000219	0+0169316000000319	0-0063886000000419	0+0016896
0000000121	0+0169146000000221	0+0179956000000321	0-0063996000000421	0+0020006
0000000123	0+0170816000000223	0+0179476000000323	0-0063866000000423	0+0017826
0000000125	0+0172216000000225	0+0179966000000325	0-0064046000000425	0+0016506
0000000127	0+0173496000000227	0+0179686000000327	0-0063956000000427	0+0017836
0000000129	0+0174276000000229	0+0180626000000329	0-0064066000000429	0+0017256
0000000131	0+0136866000000231	0+0178236000000331	0-0064906000000431	0+0018846
0000000133	0+0128316000000233	0+0177536000000333	0-0066806000000433	0+0018206
0000000135	0+0130916000000235	0+0179016000000335	0-0067656000000435	0+0015766
0000000137	0+0139056000000237	0+0180396000000337	0-0065406000000437	0+0018476
0000000139	0+0155516000000239	0+0179246000000339	0-0067966000000439	0+0017046
0000000141	0+0171586000000241	0+0179926000000341	0-0074236000000441	0+0009806
0000000143	0+0171596000000243	0+0179936000000343	0-0074236000000443	0+0009816
0000000145	0+0354186000000245	0+0366526000000345	0-0006126000000445	0+0078506
0000000147	0+0538966000000247	0+0554846000000347	0+0062726000000447	0+0148056

8. Test 208180806840

208	1808068400000000057	0+00195660000000058	0+00277060000000059	0+0000126
0000000050	0+00125060000000061	0+00124460000000062	0+00125160000000063	0+0012556
0000000064	0+00193860000000065	0+00191460000000066	0+00189460000000067	0+0018756
0000000068	0+00191460000000069	0+00187460000000070	0+00189460000000071	0+0018706
0000000072	0+00190560000000073	0+00188660000000074	0+00192760000000075	0+0019846
0000000076	0+00194560000000077	0+00193260000000078	0+00196160000000079	0+0019876
0000000080	0+00193860000000081	0+00198160000000082	0+00193760000000083	0+0019506
0000000084	0+00191360000000085	0+00193960000000086	0+00192660000000087	0+0019256
0000000088	0+00191160000000089	0+00187660000000090	0+00194460000000091	0+0019276
0000000092	0+00190760000000093	0+00192460000000094	0+00188660000000095	0+0350576
0000000096	0+00189960000000097	0+00192660000000098	0+00191460000000099	0F0008393
0000000101	0+01715860000000201	0+01799560000000301	0-00742360000000401	0+0017916
0000000103	0+01664160000000203	0+01746560000000303	0-00742360000000403	0+0014556
0000000105	0+01713860000000205	0+01797460000000305	0-00832560000000405	0+0014596
0000000107	0+01632760000000207	0+01714360000000307	0-00778560000000407	0+0015856
0000000109	0+01595060000000209	0+01606360000000309	0-00761760000000409	0+0014616
0000000111	0+01602460000000211	0+01533160000000311	0-00645760000000411	0+0018906
0000000113	0+01604260000000213	0+01691860000000313	0-00644860000000413	0+0014596
0000000115	0+01621760000000215	0+01691560000000315	0-00644560000000415	0+0015526
0000000117	0+01652460000000217	0+01686860000000317	0-00645760000000417	0+0015236
0000000119	0+01709660000000219	0+01687260000000319	0-00644160000000419	0+0015336
0000000121	0+01673560000000221	0+01784360000000321	0-00645460000000421	0+0019176
0000000123	0+01688160000000223	0+01778360000000323	0-00644260000000423	0+0016056
0000000125	0+01705160000000225	0+01741760000000325	0-00646360000000425	0+0015176
0000000127	0+01717260000000227	0+01739660000000327	0-00645660000000427	0+0016066
0000000129	0+01723660000000229	0+01748760000000329	0-00646760000000429	0+0015956
0000000131	0+01315160000000231	0+01721560000000331	0-00660260000000431	0+0018406
0000000133	0+01180660000000233	0+01716460000000333	0-00691760000000433	0+0016656
0000000135	0+01184260000000235	0+01732160000000335	0-00688560000000435	0+0014396
0000000137	0+01290160000000237	0+01746060000000337	0-00669960000000437	0+0017296
0000000139	0+01491960000000239	0+01733160000000339	0-00697660000000439	0+0015776
0000000141	0+01715960000000241	0+01799460000000341	0-00742460000000441	0+0009816
0000000143	0+01715960000000243	0+01799460000000343	0-00742460000000443	0+0009806
0000000145	0+03541860000000245	0+03655960000000345	0-00061360000000445	0+0078526
0000000147	0+05389960000000247	0+05548660000000347	0+00627060000000447	0+0148006

9. Test 208180901340

208	180901340000000057	0+001967600000000058	0+002764600000000059	0+0000136
0000000060	0+001258600000000061	0+001254600000000062	0+001260600000000063	0+0012646
0000000064	0+001941600000000065	0+001919600000000066	0+001897600000000067	0+0018786
0000000068	0+001919600000000069	0+001876600000000070	0+001894600000000071	0+0018736
0000000072	0+001911600000000073	0+001890600000000074	0+001919600000000075	0+0019906
0000000076	0+001952600000000077	0+001932600000000078	0+001960600000000079	0+0019836
0000000080	0+001946600000000081	0+001982600000000082	0+001345600000000083	0+0019496
0000000084	0+001911600000000085	0+001946600000000086	0+001921600000000087	0+0019206
0000000088	0+001909600000000089	0+001874600000000090	0+001951600000000091	0+0019196
0000000092	0+001913600000000093	0+001323600000000094	0+001884600000000095	0+0372716
0000000096	0+001891600000000097	0+001933600000000098	0+001909600000000099	0F0008393
0000000101	0+017159600000000201	0+017996600000000301	0-007422600000000401	0+0017376
0000000103	0+016639600000000203	0+017470600000000303	0-007423600000000403	0+0013646
0000000105	0+017139600000000205	0+017975600000000305	0-008538600000000405	0+0014046
0000000107	0+016315600000000207	0+017128600000000307	0-007913600000000407	0+0014986
0000000109	0+015931600000000209	0+015592600000000309	0-007720600000000409	0+0013816
0000000111	0+016004600000000211	0+015558600000000311	0-006468600000000411	0+0018436
0000000113	0+016015600000000213	0+016899600000000313	0-006464600000000413	0+0013766
0000000115	0+016160600000000215	0+016901500000000315	0-006462600000000415	0+0014986
0000000117	0+015462600000000217	0+016850600000000317	0-006476600000000417	0+0014386
0000000119	0+017088600000000219	0+016854600000000319	0-006458600000000419	0+0014626
0000000121	0+016669600000000221	0+017784600000000321	0-006475600000000421	0+0018786
0000000123	0+016802600000000223	0+017723600000000323	0-006468600000000423	0+0015116
0000000125	0+016980600000000225	0+017150600000000325	0-006477600000000425	0+0014606
0000000127	0+017104600000000227	0+017130600000000327	0-006470600000000427	0+0015276
0000000129	0+017163600000000229	0+017216600000000329	0-006482600000000429	0+0015226
0000000131	0+012925600000000231	0+016931600000000331	0-006672600000000431	0+0018126
0000000133	0+011322600000000233	0+015887600000000333	0-007010600000000433	0+0015946
0000000135	0+011201600000000235	0+017063600000000335	0-006950600000000435	0+0013796
0000000137	0+012441600000000237	0+017195500000000337	0-006763600000000437	0+0016836
0000000139	0+014608600000000239	0+017054600000000339	0-007073600000000439	0+0015026
0000000141	0+017159600000000241	0+017995600000000341	0-007423600000000441	0+0009816
0000000143	0+017160600000000243	0+017995500000000343	0-007424600000000443	0+0009816
0000000145	0+035415600000000245	0+036553600000000345	0-000515600000000445	0+0078516
0000000147	0+053917600000000247	0+055505600000000347	0+036277600000000447	0+0148076

10. Test 208220107550

0000000208	2201075500000001057	0+0022466000000058	0+0027376000000059	0+0000116
0000000060	0+0010726000000061	0+0010576000000062	0+0010666000000063	0+0010686
0000000064	0+0022236000000065	0+0022026000000066	0+0021516000000067	0+0021386
0000000068	0+0021936000000069	0+0021326000000070	0+0021356000000071	0+0021286
0000000072	0+0021526000000073	0+0021296000000074	0+0021996000000075	0+0023076
0000000076	0+0021356000000077	0+0021886000000078	0+0023196000000079	0+0023236
0000000080	0+0022436000000081	0+0022806000000082	0+0021836000000083	0+0022676
0000000084	0+0021216000000085	0+0022026000000086	0+0021726000000087	0+0021546
0000000088	0+0021846000000089	0+0021336000000090	0+0021766000000091	0+0021566
0000000092	0+0021116000000093	0+0021556000000094	0+0021706000000095	0+0587116
0000000096	0+0022236000000097	0+0022036000000098	0+0022256000000099	0F0010373
0000000101	0+0170946000000201	0+0178986000000301	0-0073946000000401	0+0016006
0000000103	0+0164256000000203	0+0172126000000303	0-0073946000000403	0+0018206
0000000105	0+0170736000000205	0+0178736000000305	0-0088456000000405	0+0013806
0000000107	0+0160096000000207	0+0167826000000307	0-0079656000000407	0+0017656
0000000109	0+0154846000000209	0+0136486000000309	0-0077186000000409	0+0015856
0000000111	0+0156316000000211	0+0145806000000311	0-0056786000000411	0+0015306
0000000113	0+0157056000000213	0+0164846000000313	0-0056776000000413	0+0019186
0000000115	0+0162826000000215	0+0164836000000315	0-0056266000000415	0+0013736
0000000117	0+0166896000000217	0+0164226000000317	0-0056396000000417	0+0017226
0000000119	0+0170886000000219	0+0164256000000319	0-0055916000000419	0+0016706
0000000121	0+0172746000000221	0+0184286000000321	0-0056106000000421	0+0016406
0000000123	0+0174546000000223	0+0133316000000323	0-0056176000000423	0+0022506
0000000125	0+0177256000000225	0+0170726000000325	0-0056276000000425	0+0014556
0000000127	0+0179106000000227	0+0169676000000327	0-0056206000000427	0+0020056
0000000129	0+0179296000000229	0+0171626000000329	0-0056386000000429	0+0018566
0000000131	0+0122076000000231	0+0168676000000331	0-0064886000000431	0+0016656
0000000133	0+0103076000000233	0+0165736000000333	0-0061746000000433	0+0022896
0000000135	0+0086936000000235	0+0168056000000335	0-0067306000000435	0+0015736
0000000137	0+0102336000000237	0+0170816000000337	0-0062716000000437	0+0021386
0000000139	0+0121336000000239	0+0169466000000339	0-0065286000000439	0+0019886
0000000141	0+0170956000000241	0+0178966000000341	0-0073946000000441	0+0008676
0000000143	0+0170956000000243	0+0178956000000343	0-0073956000000443	0+0008676
0000000145	0+0353086000000245	0+0364806000000345	0-0006036000000445	0+0077206
0000000147	0+0537896000000247	0+0552776000000347	0+0062846000000447	0+0146725

11. Test 208220215850

0000000208	2202158500000000057	0+00226360000000058	0+00274760000000059	0+0000106
0000000060	0+00109360000000061	0+00109060000000062	0+00109360000000063	0+0010956
0000000064	0+00253060000000065	0+00251260000000066	0+00240160000000067	0+0023756
0000000068	0+00234660000000069	0+00231160000000070	0+00227360000000071	0+0022506
0000000072	0+00225160000000073	0+00222960000000074	0+00246560000000075	0+0024326
0000000076	0+00230260000000077	0+00239360000000078	0+00248060000000079	0+0025376
0000000080	0+00237560000000081	0+00251460000000082	0+00234860000000083	0+0024476
0000000084	0+00235760000000085	0+00234360000000086	0+00245360000000087	0+0024396
0000000088	0+00241760000000089	0+00230360000000090	0+00229060000000091	0+0024176
0000000092	0+00225360000000093	0+00238850000000094	0+00229260000000095	0+0417186
0000000096	0+00234260000000097	0+00226960000000098	0+00235360000000099	0F0010423
0000000101	0+01710060000000201	0+01790160000000301	0-00740360000000401	0+0026026
0000000103	0+01659160000000203	0+01738660000000303	0-00740360000000403	0+0028346
0000000105	0+01708360000000205	0+01788260000000305	0-00653760000000405	0+0024926
0000000107	0+01630960000000207	0+01709060000000307	0-00532960000000407	0+0028286
0000000109	0+01587960000000209	0+01950260000000309	0-00626160000000409	0+0026546
0000000111	0+01612060000000211	0+01963060000000311	0-00544960000000411	0+0025616
0000000113	0+01606460000000213	0+01687060000000313	0-00544160000000413	0+0027846
0000000115	0+01668960000000215	0+01686960000000315	0-00543760000000415	0+0024696
0000000117	0+01756960000000217	0+01683760000000317	0-00544060000000417	0+0028016
0000000119	0+01719960000000219	0+01683960000000319	0-00537060000000419	0+0026436
0000000121	0+01830960000000221	0+01930260000000321	0-00539060000000421	0+0025476
0000000123	0+01854560000000223	0+01917160000000323	0-00537760000000423	0+0027816
0000000125	0+01869760000000225	0+02091660000000325	0-00536860000000425	0+0025326
0000000127	0+01878760000000227	0+02084760000000327	0-00537560000000427	0+0027776
0000000129	0+01879260000000229	0+02096360000000329	0-00537560000000429	0+0026966
0000000131	0+01524960000000231	0+02076660000000331	0-00554660000000431	0+0026276
0000000133	0+01562560000000233	0+02061460000000333	0-00542960000000433	0+0027686
0000000135	0+01671160000000235	0+02076060000000335	0-00568560000000435	0+0025306
0000000137	0+01752060000000237	0+02092360000000337	0-00544260000000437	0+0027726
0000000139	0+01861060000000239	0+02085060000000339	0-00571760000000439	0+0027226
0000000141	0+01710160000000241	0+01790160000000341	0-00740360000000441	0+0008676
0000000143	0+01710150000000243	0+01790060000000343	0-00740360000000443	0+0008676
0000000145	0+03533160000000245	0+03649960000000345	0-00060760000000445	0+0077236
0000000147	0+05382560000000247	0+05531260000000347	0+00628860000000447	0+0146856

12. Test 208220315550

0000000205	2203155500000000057	0+00223150000000058	0+00274560000000059	0+0000106
0000000060	0+00109160000000061	0+00108760000000062	0+00108860000000063	0+0010906
0000000064	0+00246360000000065	0+00244950000000066	0+00233760000000067	0+0023236
0000000068	0+00230760000000069	0+00227760000000070	0+00224660000000071	0+0022286
0000000072	0+00223360000000073	0+00222560000000074	0+00242760000000075	0+0024246
0000000076	0+00227860000000077	0+00237960000000078	0+00245960000000079	0+0025066
0000000080	0+00236160000000081	0+00248660000000082	0+00232960000000083	0+0024246
0000000084	0+00230260000000085	0+00231960000000086	0+00241560000000087	0+0023826
0000000088	0+00238160000000089	0+00226150000000090	0+00225760000000091	0+0023716
0000000092	0+00223560000000093	0+00234160000000094	0+00226660000000095	0+0357816
0000000096	0+00230660000000097	0+00225450000000098	0+00230360000000099	0F0010403
0000000101	0+01709960000000201	0+01790350000000301	0-00740260000000401	0+0026316
0000000103	0+01656060000000203	0+01735260000000303	0-00740160000000403	0+0027786
0000000105	0+01708560000000205	0+01788460000000305	0-00668260000000405	0+0024306
0000000107	0+01623060000000207	0+01701260000000307	0-00645360000000407	0+0028156
0000000109	0+01578360000000209	0+01911860000000309	0-00637460000000409	0+0026016
0000000111	0+01599960000000211	0+01920260000000311	0-00552360000000411	0+0025796
0000000113	0+01538560000000213	0+01677260000000313	0-00551060000000413	0+0027446
0000000115	0+01654160000000215	0+01677060000000315	0-00545160000000415	0+0023856
0000000117	0+01740960000000217	0+01672860000000317	0-00546960000000417	0+0027906
0000000119	0+01718460000000219	0+01673360000000319	0-00539560000000419	0+0025746
0000000121	0+01811560000000221	0+01915160000000321	0-00539560000000421	0+0025416
0000000123	0+01833960000000223	0+01905460000000323	0-00540960000000423	0+0027436
0000000125	0+01851360000000225	0+02058960000000325	0-00541760000000425	0+0024346
0000000127	0+01862260000000227	0+02054160000000327	0-00541460000000427	0+0027576
0000000129	0+01865660000000229	0+02065860000000329	0-00539860000000429	0+0026366
0000000131	0+01475460000000231	0+02045060000000331	0-00553860000000431	0+0025856
0000000133	0+01494760000000233	0+02028560000000333	0-00547160000000433	0+0026996
0000000135	0+01603560000000235	0+02045260000000335	0-00574460000000435	0+0024466
0000000137	0+01692060000000237	0+02052560000000337	0-00547860000000437	0+0027176
0000000139	0+01823460000000239	0+02055160000000339	0-00577960000000439	0+0026576
0000000141	0+01710060000000241	0+01790160000000341	0-00740160000000441	0+0008726
0000000143	0+01710160000000243	0+01790260000000343	0-00740260000000443	0+0008726
0000000145	0+03532860000000245	0+03649860000000345	0-00060360000000445	0+0077326
0000000147	0+05382160000000247	0+05530160000000347	0+00628660000000447	0+0146906

13. Test 208220415050

0000000298	2204150500000000057	0+0022326000000000058	0+0027516000000000059	0+0000116
0000000060	0+0010996000000000061	0+0010956000000000062	0+0010966000000000063	0+0010986
0000000064	0+0023936000000000065	0+0023766000000000066	0+0022876000000000067	0+0022696
0000000068	0+0022866000000000069	0+0022436000000000070	0+0022306000000000071	0+0022136
0000000072	0+0022276000000000073	0+0022046000000000074	0+0023816000000000075	0+0024006
0000000076	0+0022726000000000077	0+0023606000000000078	0+0024186000000000079	0+0024686
0000000080	0+0023416000000000081	0+0024536000000000082	0+0023186000000000083	0+0023926
0000000084	0+0022656000000000085	0+0023016000000000086	0+0023666000000000087	0+0023246
0000000088	0+0023226000000000089	0+0022446000000000090	0+0022486000000000091	0+0023266
0000000092	0+0022186000000000093	0+0022836000000000094	0+0022516000000000095	0+0316726
0000000096	0+0022856000000000097	0+0022446000000000098	0+0022726000000000099	0F0010413
0000000101	0+0171016000000000201	0+0179056000000000301	0-0074026000000000401	0+0024726
0000000103	0+0165136000000000203	0+0173016000000000303	0-0074026000000000403	0+0026466
0000000105	0+0170806000000000205	0+0178826000000000305	0-0069286000000000405	0+0022686
0000000107	0+0161566000000000207	0+0169286000000000307	0-0066546000000000407	0+0027546
0000000109	0+0155776000000000209	0+0185206000000000309	0-0065636000000000409	0+0024686
0000000111	0+0158606000000000211	0+0184965000000000311	0-0055946000000000411	0+0024416
0000000113	0+0159136000000000213	0+0166686000000000313	0-0055846000000000413	0+0026246
0000000115	0+0163606000000000215	0+0165636000000000315	0-0055026000000000415	0+0022216
0000000117	0+0171836000000000217	0+0166156000000000317	0-0055376000000000417	0+0027766
0000000119	0+0171536000000000219	0+0165206000000000319	0-0054726000000000419	0+0024336
0000000121	0+0178676000000000221	0+0189486000000000321	0-0054656000000000421	0+0025206
0000000123	0+0180636000000000223	0+0188576000000000323	0-0054826000000000423	0+0026756
0000000125	0+0183006000000000225	0+0200686000000000325	0-0055016000000000425	0+0022916
0000000127	0+0184046000000000227	0+0200435000000000327	0-0055126000000000427	0+0027216
0000000129	0+0184496000000000229	0+0201466000000000329	0-0054976000000000429	0+0025296
0000000131	0+0140616000000000231	0+0199146000000000331	0-0056836000000000431	0+0025866
0000000133	0+0139126000000000233	0+0197526000000000333	0-0055376000000000433	0+0026356
0000000135	0+0150816000000000235	0+0199336000000000335	0-0059286000000000435	0+0023046
0000000137	0+0161026000000000237	0+0201145000000000337	0-0055386000000000437	0+0026226
0000000139	0+0175616000000000239	0+0200655000000000339	0-0059066000000000439	0+0025556
0000000141	0+0171016000000000241	0+0179036000000000341	0-0074036000000000441	0+0008736
0000000143	0+0171006000000000243	0+0179036000000000343	0-0074036000000000443	0+0008746
0000000145	0+0353286000000000245	0+0365016000000000345	0-0006056000000000445	0+0077336
0000000147	0+0538386000000000247	0+0553156000000000347	0+0062876000000000447	0+0146926

14. Test 208220514450

0000000208	2205144500000000057	0+0022416000000000058	0+0027516000000000059	0+0000116
0000000060	0+0011076000000000061	0+0011056000000000062	0+0011066000000000063	0+0011086
0000000064	0+0023506000000000065	0+0023256000000000066	0+0022526000000000067	0+0022366
0000000068	0+0022796000000000069	0+0022316000000000070	0+0022156000000000071	0+0022046
0000000072	0+0022276000000000073	0+0022016000000000074	0+0023266000000000075	0+0023756
0000000076	0+0022646000000000077	0+0023326000000000078	0+0023866000000000079	0+0024476
0000000080	0+0023156000000000081	0+0024306000000000082	0+0022976000000000083	0+0023576
0000000084	0+0022546000000000085	0+0022856000000000086	0+0023416000000000087	0+0023106
0000000088	0+0022796000000000089	0+0022276000000000090	0+0022436000000000091	0+0023016
0000000092	0+0022106000000000093	0+0022456000000000094	0+0022376000000000095	0+0314616
0000000096	0+0023016000000000097	0+0022376000000000098	0+0022886000000000099	0F0010413
0000000101	0+0171016000000000201	0+0179066000000000301	0-0074036000000000401	0+0022796
0000000103	0+0164866000000000203	0+0172686000000000303	0-0074026000000000403	0+0024206
0000000105	0+0170826000000000205	0+0178836000000000305	0-0071936000000000405	0+0020956
0000000107	0+0160876000000000207	0+0168675000000000307	0-0068616000000000407	0+0026066
0000000109	0+0155986000000000209	0+0179446000000000309	0-0067496000000000409	0+0023026
0000000111	0+0157716000000000211	0+0178466000000000311	0-0056336000000000411	0+0023186
0000000113	0+0156386000000000213	0+0165826000000000313	0-0056306000000000413	0+0024626
0000000115	0+0162936000000000215	0+0165895000000000315	0-0055506000000000415	0+0020936
0000000117	0+0170146000000000217	0+0165395000000000317	0-0055736000000000417	0+0026836
0000000119	0+0171266000000000219	0+0165406000000000319	0-0055086000000000419	0+0023516
0000000121	0+0176446000000000221	0+0187746000000000321	0-0055186000000000421	0+0025026
0000000123	0+0178406000000000223	0+0186816000000000323	0-0055356000000000423	0+0026256
0000000125	0+0180976000000000225	0+0195796000000000325	0-0055616000000000425	0+0021816
0000000127	0+0182256000000000227	0+0195576000000000327	0-0055456000000000427	0+0026886
0000000129	0+0182866000000000229	0+0196626000000000329	0-0055446000000000429	0+0024416
0000000131	0+0134066000000000231	0+0194146000000000331	0-0058456000000000431	0+0025946
0000000133	0+0129056000000000233	0+0192506000000000333	0-0056516000000000433	0+0025686
0000000135	0+0141116000000000235	0+0194366000000000335	0-0061036000000000435	0+0021916
0000000137	0+0152886000000000237	0+0196226000000000337	0-0056206000000000437	0+0025386
0000000139	0+0170886000000000239	0+0195686000000000339	0-0060216000000000439	0+0024756
0000000141	0+0171026000000000241	0+0179046000000000341	0-0074046000000000441	0+0008746
0000000143	0+0171026000000000243	0+0179046000000000343	0-0074046000000000443	0+0008746
0000000145	0+0353366000000000245	0+0365026000000000345	0-0006046000000000445	0+0077376
0000000147	0+0538406000000000247	0+0553116000000000347	0+0062936000000000447	0+0146946

15. Test 208220613650

0000000208	2206136500000000057	0+0022526000000058	0+0027516000000059	0+0000116
0000000060	0+0011036000000061	0+0010995000000062	0+0011016000000063	0+0011036
0000000064	0+0022916000000065	0+0022756000000066	0+0022226000000067	0+0022076
0000000068	0+0022546000000069	0+0022046000000070	0+0022016000000071	0+0021866
0000000072	0+0022086000000073	0+0021856000000074	0+0022766000000075	0+0023406
0000000076	0+0022396000000077	0+0022876000000078	0+0023576000000079	0+0024136
0000000080	0+0022656000000081	0+0023746000000082	0+0022586000000083	0+0022966
0000000084	0+0022166000000085	0+0022506000000086	0+0022896000000087	0+0022626
0000000088	0+0022426000000089	0+0022016000000090	0+0022316000000091	0+0022766
0000000092	0+0021886000000093	0+0022236000000094	0+0022196000000095	0+0276066
0000000096	0+0022626000000097	0+0022186000000098	0+0022626000000099	0F0010413
0000000101	0+0171026000000201	0+0179086000000301	0-0074036000000401	0+0021386
0000000103	0+0164396000000203	0+0172196000000303	0-0074046000000403	0+0021846
0000000105	0+0170816000000205	0+0178846000000305	0-0075696000000405	0+0019186
0000000107	0+0160446000000207	0+0168256000000307	0-0071225000000407	0+0023386
0000000109	0+0155366000000209	0+0171126000000309	0-0069796000000409	0+0021226
0000000111	0+0156886000000211	0+0170146000000311	0-0056586000000411	0+0021526
0000000113	0+0157566000000213	0+0165286000000313	0-0056546000000413	0+0023206
0000000115	0+0163046000000215	0+0165306000000315	0-0055926000000415	0+0019446
0000000117	0+0168386000000217	0+0164756000000317	0-0056086000000417	0+0023866
0000000119	0+0171056000000219	0+0164695000000319	0-0055586000000419	0+0021986
0000000121	0+0174516000000221	0+0185886000000321	0-0055716000000421	0+0024216
0000000123	0+0176346000000223	0+0185146000000323	0-0055856000000423	0+0024616
0000000125	0+0179056000000225	0+0183666000000325	0-0055976000000425	0+0020446
0000000127	0+0180566000000227	0+0189336000000327	0-0055896000000427	0+0025816
0000000129	0+0181036000000229	0+0190405000000329	0-0055986000000429	0+0023236
0000000131	0+0127366000000231	0+0187566000000331	0-0059686000000431	0+0025676
0000000133	0+0114686000000233	0+0186116000000333	0-0059286000000433	0+0024726
0000000135	0+0127706000000235	0+0188096000000335	0-0062876000000435	0+0020416
0000000137	0+0143686000000237	0+0190026000000337	0-0057876000000437	0+0024876
0000000139	0+0163246000000239	0+0189476000000339	0-0062076000000439	0+0023746
0000000141	0+0171036000000241	0+0179066000000341	0-0074045000000441	0+0008776
0000000143	0+0171036000000243	0+0179066000000343	0-0074046000000443	0+0008776
0000000145	0+0353396000000245	0+0364996000000345	0-0006056000000445	0+0077406
0000000147	0+0538446000000247	0+0553266000000347	0+0062866000000447	0+0146946

16. Test 208220712550

0000000208	2207125500000000057	0+00228760000000058	0+00275760000000059	0+0000116
0000000060	0+00111760000000061	0+00111450000000062	0+00111560000000063	0+0011166
0000000064	0+00228560000000065	0+00226660000000066	0+00221560000000067	0+0022056
0000000068	0+00225660000000069	0+00220160000000070	0+00220260000000071	0+0021906
0000000072	0+00221260000000073	0+00218960000000074	0+00227560000000075	0+0023316
0000000076	0+00225360000000077	0+00227860000000078	0+00235860000000079	0+0024086
0000000080	0+00225860000000081	0+00235950000000082	0+00227160000000083	0+0023086
0000000084	0+00220960000000085	0+00223760000000086	0+00224960000000087	0+0022326
0000000088	0+00224660000000089	0+00219060000000090	0+00224160000000091	0+0022266
0000000092	0+00218960000000093	0+00222950000000094	0+00221060000000095	0+0236216
0000000096	0+00224560000000097	0+00222860000000098	0+00224260000000099	0F0010403
0000000101	0+01710260000000201	0+01790860000000301	0-00740460000000401	0+0021556
0000000103	0+01642860000000203	0+01721360000000303	0-00740460000000403	0+0020056
0000000105	0+01708160000000205	0+01788560000000305	0-00796460000000405	0+0018286
0000000107	0+01601650000000207	0+01679860000000307	0-00734760000000407	0+0021916
0000000109	0+01550360000000209	0+01631960000000309	0-00716260000000409	0+0019256
0000000111	0+01564760000000211	0+01629260000000311	0-00567760000000411	0+0022226
0000000113	0+01571460000000213	0+01650260000000313	0-00567560000000413	0+0021376
0000000115	0+01630060000000215	0+01650360000000315	0-00562060000000415	0+0018666
0000000117	0+01673760000000217	0+01644160000000317	0-00553960000000417	0+0021866
0000000119	0+01709960000000219	0+01643760000000319	0-00558760000000419	0+0020296
0000000121	0+01733860000000221	0+01847860000000321	0-00560560000000421	0+0023556
0000000123	0+01751060000000223	0+01838660000000323	0-00561460000000423	0+0023546
0000000125	0+01777860000000225	0+01837560000000325	0-00562960000000425	0+0018576
0000000127	0+01796160000000227	0+01835260000000327	0-00561760000000427	0+0023926
0000000129	0+01798160000000229	0+01849160000000329	0-00563460000000429	0+0022016
0000000131	0+01240060000000231	0+01819360000000331	0-00599560000000431	0+0023456
0000000133	0+01066360000000233	0+01798960000000333	0-00615660000000433	0+0023946
0000000135	0+01153160000000235	0+01822760000000335	0-00632860000000435	0+0018626
0000000137	0+01372360000000237	0+01845460000000337	0-00594060000000437	0+0024336
0000000139	0+01560760000000239	0+01832760000000339	0-00632460000000439	0+0022626
0000000141	0+01710260000000241	0+01790760000000341	0-00740560000000441	0+0008796
0000000143	0+01710260000000243	0+01790660000000343	0-00740560000000443	0+0008796
0000000145	0+03533860000000245	0+03650760000000345	0-00050460000000445	0+0077406
0000000147	0+05383860000000247	0+05530160000000347	0+00628560000000447	0+0146946

17. Test 208220810950

0000000208	2208109500000000057	0+0022936000000000058	0+002757600000000059	0+00C0116
0000000060	0+00111360000000061	0+0011096000000000062	0+0011.06000000000063	0+0011126
0000000054	0+00227860000000065	0+0022546000000000066	0+002208600000000067	0+0021956
0000000068	0+00225160000000069	0+0021906000000000070	0+002192600000000071	0+0021836
0000000072	0+00220860000000073	0+0021826000000000074	0+002269600000000075	0+0023526
0000000076	0+00221860000000077	0+0022866000000000078	0+002352600000000079	0+0023796
0000000080	0+00227960000000081	0+0023326000000000082	0+002281600000000083	0+0022986
0000000084	0+00220060000000085	0+0022506000000000086	0+002220600000000087	0+0022286
0000000088	0+00222660000000089	0+0022226000000000090	0+002231600000000091	0+0022046
0000000092	0+00220360000000093	0+0022036000000000094	0+002227600000000095	0+0255246
0000000096	0+00226460000000097	0+0022826000000000098	0+002259600000000099	0F0010413
0000000101	0+01709160000000201	0+0179096000000000301	0-007404600000000401	0+0018996
0000000103	0+01641560000000203	0+0172046000000000303	0-007404600000000403	0+0019316
0000000105	0+01708560000000205	0+0178846000000000305	0-008643600000000405	0+0016596
0000000107	0+01600960000000207	0+0167936000000000307	0-007765600000000407	0+0019416
0000000109	0+01549260000000209	0+0149286000000000309	0-007479600000000409	0+0017566
0000000111	0+01636600000000211	0+0158936000000000311	0-005676600000000411	0+0017886
0000000113	0+01570460000000213	0+0164966000000000313	0-005675600000000413	0+0020626
0000000115	0+01629860000000215	0+0164926000000000315	0-005627600000000415	0+0016636
0000000117	0+01571160000000217	0+0164356000000000317	0-005637600000000417	0+0018916
0000000119	0+01709860000000219	0+0164376000000000319	0-005587600000000419	0+0018416
0000000121	01731760000000221	0+0184596000000000321	0-005607600000000421	0+0019396
0000000123	74866000000000223	0+0183626000000000323	0-005614600000000423	0+0023276
0000000125	.17761600000000225	0+0177626000000000325	0-005625600000000425	0+0017226
0000000127	0+01794860000000227	0+0175726000000000327	0-005615600000000427	0+0021526
0000000129	0+01796560000000229	0+0178486000000000329	0-005635600000000429	0+0020116
0000000131	0+01223060000000231	0+0175646000000000331	0-006164600000000431	0+0020106
0000000133	0+01035660000000233	0+0173296000000000333	0-006154600000000433	0+0023826
0000000135	0+00889260000000235	0+0175406000000000335	0-006523600000000435	0+0018156
0000000137	0+01062460000000237	0+0177936000000000337	0-006131600000000437	0+0023416
0000000139	0+01328460000000239	0+0176556000000000339	0-006409600000000439	0+0021496
0000000141	0+01710360000000241	0+0179066000000000341	0-007405500000000441	0+0008826
0000000143	0+01710560000000243	0+0179066000000000343	0-007404600000000443	0+0008826
0000000145	0+03534060000000245	0+0365066000000000345	0-000603600000000445	0+0077446
0000000147	0+05781960000000247	0+0553266000000000347	0+006286600000000447	0+0147006

18. Test 208220907550

0000000208	2209075500000000057	0+00232960000000058	0+00277060000000059	0+0000126
0000000060	0+00113960000000061	0+00113960000000062	0+00113860000000053	0+0011416
0000000064	0+00230160000000065	0+00227760000000066	0+00223460000000057	0+0022186
0000000068	0+00227760000000069	0+00221160000000070	0+00221960000000071	0+0022076
0000000072	0+00223560000000073	0+00220760000000074	0+00226960000000075	0+0023806
0000000076	0+00221260000000077	0+00226350000000078	0+00238960000000079	0+0023986
0000000080	0+00232060000000081	0+00235650000000082	0+00225960000000083	0+0023356
0000000084	0+00219960000000085	0+00228250000000086	0+00224760000000087	0+0022286
0000000088	0+00226160000000089	0+00221360000000090	0+00225460000000091	0+0022326
0000000092	0+00219360000000093	0+00223460000000094	0+00225360000000095	0+0266956
0000000096	0+00231060000000097	0+00228360000000098	0+00230560000000099	0F0010413
0000000101	0+01710260000000201	0+01790850000000301	0-00740560000000401	0+0016366
0000000103	0+01540560000000203	0+01720060000000303	0-00740560000000403	0+0018226
0000000105	0+01708160000000205	0+01788360000000305	0-00885060000000405	0+0014056
0000000107	0+01601660000000207	0+01679560000000307	0-00797360000000407	0+0017736
0000000109	0+01549760000000209	0+01353460000000309	0-00772860000000409	0+0016036
0000000111	0+01563860000000211	0+01456760000000311	0-00568160000000411	0+0015516
0000000113	0+01570560000000213	0+01649160000000313	0-00568060000000413	0+0019386
0000000115	0+01629160000000215	0+01648860000000315	0-00563160000000415	0+0013946
0000000117	0+01669860000000217	0+01642860000000317	0-00564260000000417.	0+0017456
0000000119	0+01709960000000219	0+01643560000000319	0-00559360000000419	0+0016946
0000000121	0+01729060000000221	0+01844060000000321	0-00561460000000421	0+0016576
0000000123	0+01746560000000223	0+01834960000000323	0-00562260000000423	0+0022736
0000000125	0+01773960000000225	0+01708460000000325	0-00563160000000425	0+0014666
0000000127	0+01792860000000227	0+01697950000000327	0-00562460000000427	0+0020396
0000000129	0+01795060000000229	0+01717560000000329	0-00564160000000429	0+0018776
0000000131	0+01220960000000231	0+01688160000000331	0-00648960000000431	0+0016766
0000000133	0+01031460000000233	0+01658750000000333	0-00618860000000433	0+0023266
0000000135	0+00872060000000235	0+01682060000000335	0-00672960000000435	0+0015936
0000000137	0+01023860000000237	0+01709560000000337	0-00626560000000437	0+0021506
0000000139	0+01212760000000239	0+01696460000000339	0-00654060000000439	0+0020116
0000000141	0+01710260000000241	0+01790560000000341	0-00740560000000441	0+0008836
0000000143	0+01710260000000243	0+01790660000000343	0-00740560000000443	0+0008836
0000000145	0+03533860000000245	0+03650760000000345	0-00050460000000445	0+0077456
0000000147	0+05384860000000247	0+05533560000000347	0+00629160000000447	0+0147066

19. Test 208221002450

0000000208	2210024500000000057	0+0023266000000058	0+0027566000000059	0+0000126
0000000060	0+0011316000000061	0+0011276000000062	0+0011306000000063	0+0011326
0000000064	0+0022926000000065	0+0022676000000066	0+0022226000000067	0+0022086
0000000068	0+0022676000000069	0+0022016000000070	0+0022076000000071	0+0021956
0000000072	0+0022246000000073	0+0021996000000074	0+0022416000000075	0+0023716
0000000076	0+0021816000000077	0+0022186000000078	0+0023896000000079	0+0023946
0000000080	0+0023196000000081	0+0023506000000082	0+0022206000000083	0+0023396
0000000084	0+0021656000000085	0+0022755000000086	0+0022316000000087	0+0021986
0000000088	0+0022526000000089	0+0021825000000090	0+0022516000000091	0+0022306
0000000092	0+0021656000000093	0+0022306000000094	0+0022346000000095	0+0279466
0000000095	0+0023046000000097	0+0022646000000098	0+0023016000000099	0F0010413
0000000101	0+0171026000000201	0+0173096000000301	0-0074056000000401	0+0014736
0000000103	0+0164256000000203	0+0172135000000303	0-0074046000000403	0+0017766
0000000105	0+0170806000000205	0+0178845000000305	0-0039926000000405	0+0012606
0000000107	0+0160126000000207	0+0167916000000307	0-0081016000000407	0+0016806
0000000109	0+0154896000000209	0+0128316000000309	0-0078866000000409	0+0015146
0000000111	0+0156326000000211	0+0137496000000311	0-0056836000000411	0+0013916
0000000113	0+0156996000000213	0+0164936000000313	0-0056806000000413	0+0018796
0000000115	0+0162896000000215	0+0164886000000315	0-0056346000000415	0+0012446
0000000117	0+0156936000000217	0+0164305000000317	0-0055436000000417	0+0016296
0000000119	0+0170956000000219	0+0164306000000319	0-0055966000000419	0+0016196
0000000121	0+0172816000000221	0+0184396000000321	0-0055166000000421	0+0014736
0000000123	0+0174546000000223	0+0183386000000323	0-0056276000000423	0+0022516
0000000125	0+0177346000000225	0+0166586000000325	0-0056346000000425	0+0013186
0000000127	0+0179186000000227	0+0165535000000327	0-0056296000000427	0+0019436
0000000129	0+0179266000000229	0+0167556000000329	0-0056446000000429	0+0018056
0000000131	0+0121956000000231	0+0164665000000331	0-0066476000000431	0+0014676
0000000133	0+0102926000000233	0+0161326000000333	0-0062086000000433	0+0022646
0000000135	0+0084716000000235	0+0163725000000335	0-0068606000000435	0+0014336
0000000137	0+0099346000000237	0+0166596000000337	0-0063576000000437	0+0020226
0000000139	0+0114466000000239	0+0165375000000339	0-0066306000000439	0+0019286
0000000141	0+0171026000000241	0+0179056000000341	0-0074066000000441	0+0008836
0000000143	0+0171036000000243	0+0179066000000343	0-0074056000000443	0+0008836
0000000145	0+0353346000000245	0+0365006000000345	0-0006066000000445	0+0077446
0000000147	0+0538596000000247	0+0553285000000347	0+0062836000000447	0+0147056

20. Test 208221107960

0000000208	221107950000000057	0+0029236000000058	0+0027566000000059	0+0000126
0000000060	0+0011176000000061	0+0011126000000062	0+0011146000000063	0+0011176
0000000064	0+0030526000000065	0+0029946000000066	0+0028576000000067	0+0028326
0000000068	0+0028656000000069	0+0027985000000070	0+0027646000000071	0+0027496
0000000072	0+0027746000000073	0+0027546000000074	0+0027266000000075	0+0030676
0000000076	0+0025706000000077	0+0027856000000078	0+0031646000000079	0+0031986
0000000080	0+0029786000000081	0+0031096000000082	0+0026696000000083	0+0031396
0000000084	0+0025396000000085	0+0029366000000086	0+0029306000000087	0+0026226
0000000088	0+0030226000000089	0+0025876000000090	0+0029016000000091	0+0029256
0000000092	0+0025976000000093	0+0029516000000094	0+0026956000000095	0+0347246
0000000096	0+0029706000000097	0+0028176000000098	0+0029606000000099	0F0012513
0000000101	0+0171056000000201	0+0179146000000301	0-0074066000000401	0+0015006
0000000103	0+0162596000000203	0+0170476000000303	0-0074066000000403	0+0028196
0000000105	0+0170766000000205	0+0178846000000305	0-0092486000000405	0+0011116
0000000107	0+0157826000000207	0+0165615000000307	0-0078126000000407	0+0024786
0000000109	0+0150596000000209	0+0108286000000309	0-0077466000000409	0+0018606
0000000111	0+0153686000000211	0+0113115000000311	0-0046186000000411	0+0013296
0000000113	0+0155156000000213	0+0161786000000313	0-0046195000000413	0+0029026
0000000115	0+0163386000000215	0+0161736000000315	0-0045066000000415	0+0010526
0000000117	0+0173826000000217	0+0161055000000317	0-0045146000000417	0+0024576
0000000119	0+0171736000000219	0+0161036000000319	0-0044266000000419	0+0018226
0000000121	0+0183616000000221	0+0196276000000321	0-0044416000000421	0+0013946
0000000123	0+0166476000000223	0+0194576000000323	0-0044906000000423	0+0031346
0000000125	0+0190206000000225	0+0164466000000325	0-0044746000000425	0+0011336
0000000127	0+0192416000000227	0+0162326000000327	0-0044935000000427	0+0027026
0000000129	0+0191456000000229	0+0165546000000329	0-0044966000000429	0+0020496
0000000131	0+0122726000000231	0+0161906000000331	0-0062276000000431	0+0016146
0000000133	0+0101226000000233	0+0155936000000333	0-0050396000000433	0+0032046
0000000135	0+0073746000000235	0+0160276000000335	0-0067846000000435	0+0013056
0000000137	0+0097986000000237	0+0164616000000337	0-0053076000000437	0+0028216
0000000139	0+0100976000000239	0+0162816000000339	0-0061946000000439	0+0022476
0000000141	0+0171046000000241	0+0179115000000341	0-0074066000000441	0+0008886
0000000143	0+0171056000000243	0+0179116000000343	0-0074076000000443	0+0008886
0000000145	0+0353456000000245	0+0365096000000345	0-0006056000000445	0+0077526
0000000147	0+0538476000000247	0+0553426000000347	0+0062896000000447	0+0147096

21. Test 208221215860

0000000208	2212158600000000057	0+0028496000000000058	0+00277060000000059	0+0000136
0000000060	0+00111960000000061	0+0011166000000000062	0+00111660000000063	0+0011186
0000000064	0+00321360000000065	0+0031866000000000066	0+00303060000000067	0+0030046
0000000068	0+00295760000000069	0+0029196000000000070	0+00285160000000071	0+0028106
0000000072	0+00280860000000073	0+0027996000000000074	0+00313960000000075	0+0030786
0000000076	0+00286760000000077	0+0030216000000000078	0+00312960000000079	0+0032206
0000000080	0+00300160000000081	0+0031916000000000082	0+00294360000000083	0+0030896
0000000084	0+00296960000000085	0+0029586000000000086	0+00310360000000087	0+0030956
0000000088	0+00304460000000089	0+0028816000000000090	0+00289360000000091	0+0030576
0000000092	0+00279560000000093	0+0030116000000000094	0+00286860000000095	0+0317886
0000000096	0+00297960000000097	0+0028516000000000098	0+00297560000000099	0F0012523
0000000101	0+01710360000000201	0+0179106000000000301	0-00740860000000401	0+0033226
0000000103	0+01637560000000203	0+0171436000000000303	0-00740860000000403	0+0038416
0000000105	0+01707960000000205	0+0178866000000000305	0-00616460000000405	0+0031886
0000000107	0+01594660000000207	0+0167236000000000307	0-00583660000000407	0+0037816
0000000109	0+01527560000000209	0+0200226000000000309	0-00573560000000409	0+0034966
0000000111	0+01563260000000211	0+0202436000000000311	0-00445760000000411	0+0031946
0000000113	0+01557760000000213	0+0163906000000000313	0-00447160000000413	0+0038046
0000000115	0+01658060000000215	0+0163886000000000315	0-00443960000000415	0+0031856
0000000117	0+01782260000000217	0+0163356000000000317	0-00442560000000417	0+0037036
0000000119	0+01725860000000219	0+0163416000000000319	0-00431260000000419	0+0035176
0000000121	0+01896460000000221	0+0200716000000000321	0-00432860000000421	0+0032036
0000000123	0+01928460000000223	0+0199186000000000323	0-00438060000000423	0+0037996
0000000125	0+01954460000000225	0+0223826000000000325	0-00434460000000425	0+0033276
0000000127	0+01972460000000227	0+0222906000000000327	0-00435360000000427	0+0036756
0000000129	0+01965960000000229	0+0224396000000000329	0-00434860000000429	0+0036466
0000000131	0+01382760000000231	0+0221936000000000331	0-00472960000000431	0+0033856
0000000133	0+01438460000000233	0+0219476000000000333	0-00443560000000433	0+0037656
0000000135	0+01667460000000235	0+0221646000000000335	0-00495860000000435	0+0033726
0000000137	0+01806660000000237	0+0223866000000000337	0-00445760000000437	0+0036906
0000000139	0+01915660000000239	0+0223186000000000339	0-00482960000000439	0+0037176
0000000141	0+01710360000000241	0+0179096000000000341	0-00740860000000441	0+0008886
0000000143	0+01710260000000243	0+0179096000000000343	0-00740960000000443	0+0008886
0000000145	0+03533760000000245	0+0365066000000000345	0-00060760000000445	0+0077516
0000000147	0+05383660000000247	0+0553356000000000347	0+00629060000000447	0+0147166

22. Test 208221315560

0000000208	2213155600000000057	0+00285150000000058	0+00277960000000059	0+0000126
0000000060	0+00113360000000061	0+00113160000000062	0+00113060000000063	0+0011346
0000000054	0+00315860000000065	0+00313250000000066	0+00298560000000067	0+0029636
0000000058	0+00293860000000069	0+00289260000000070	0+00284160000000071	0+0028166
0000000072	0+00282460000000073	0+00281060000000074	0+00311460000000075	0+0030896
0000000076	0+00286160000000077	0+00302360000000078	0+00312760000000079	0+0032166
0000000080	0+00300460000000081	0+00319560000000082	0+00293160000000083	0+0030846
0000000084	0+00292960000000085	0+00294760000000086	0+00308960000000087	0+0030596
0000000088	0+00302960000000089	0+00286360000000090	0+00288360000000091	0+0030246
0000000092	0+00280060000000093	0+00238250000000094	0+00286260000000095	0+0251306
0000000096	0+00296760000000097	0+00285460000000098	0+00294460000000099	0F0012523
0000000101	0+01710260000000201	0+01791060000000301	0-00740760000000401	0+0032996
0000000103	0+01631160000000203	0+01710560000000303	0-00740760000000403	0+0037886
0000000105	0+01707660000000205	0+01738460000000305	0-00639460000000405	0+0030416
0000000107	0+01587260000000207	0+01664660000000307	0-00602260000000407	0+0037436
0000000109	0+01518460000000209	0+01936660000000309	0-00591060000000409	0+0033206
0000000111	0+01551960000000211	0+01958660000000311	0-00452560000000411	0+0031256
0000000113	0+01553960000000213	0+01629060000000313	0-00451660000000413	0+0037826
0000000115	0+01648950000000215	0+01629360000000315	0-00444360000000415	0+0030716
0000000117	0+01767360000000217	0+01623360000000317	0-00443560000000417	0+0036656
0000000119	0+01723160000000219	0+01623760000000319	0-00434260000000419	0+0034116
0000000121	0+01873560000000221	0+01990060000000321	0-00434160000000421	0+0031236
0000000123	0+01904660000000223	0+01977160000000323	0-00440660000000423	0+0037806
0000000125	0+01936360000000225	0+02193160000000325	0-00437160000000425	0+0032176
0000000127	0+01956860000000227	0+02185260000000327	0-00440760000000427	0+0036646
0000000129	0+01949260000000229	0+02200150000000329	0-00438960000000429	0+0036376
0000000131	0+01302160000000231	0+02172760000000331	0-00472660000000431	0+0032626
0000000133	0+01309060000000233	0+02147860000000333	0-00446760000000433	0+0037116
0000000135	0+01579760000000235	0+02170650000000335	0-00511560000000435	0+0032196
0000000137	0+01737460000000237	0+02193560000000337	0-00450960000000437	0+0036266
0000000139	0+01855960000000239	0+02187160000000339	0-00490560000000439	0+0036546
0000000141	0+01710160000000241	0+01790860000000341	0-00740860000000441	0+0008916
0000000143	0+01710160000000243	0+01790960000000343	0-00740860000000443	0+0008906
0000000145	0+03534860000000245	0+03651860000000345	0-00060260000000445	0+0077556
0000000147	0+05384860000000247	0+05534560000000347	0+00628860000000447	0+0147156

23. Test 208221315260

0000000208	2213152600000000057	0+00288060000000058	0+00278160000000059	0+0000126
0000000060	0+00116460000000061	0+00116260000000062	0+00116360000000063	0+0011656
0000000064	0+00314060000000065	0+00310160000000066	0+00297060000000067	0+0029426
0000000068	0+00295160000000069	0+00289260000000070	0+00285860000000071	0+0028336
0000000072	0+00285560000000073	0+00283060000000074	0+00308760000000075	0+0030996
0000000076	0+00286260000000077	0+00303960000000078	0+00311960000000079	0+0032136
0000000080	0+00301460000000081	0+00319260000000082	0+00293860000000083	0+0030826
0000000084	0+00293160000000085	0+00294960000000086	0+00308160000000087	0+0030386
0000000088	0+00299960000000089	0+00286660000000090	0+00289360000000091	0+0030086
0000000092	0+00280560000000093	0+00294960000000094	0+00287060000000095	0+0245786
0000000096	0+00297960000000097	0+00288060000000098	0+00292960000000099	0F0012513
0000000101	0+01710360000000201	0+01791360000000301	0-00741160000000401	0+0032016
0000000103	0+01630060000000203	0+01708260000000303	0-00741160000000403	0+0036996
0000000105	0+01707760000000205	0+01788560000000305	0-00666160000000405	0+0028566
0000000107	0+01582160000000207	0+01659860000000307	0-00523260000000407	0+0036786
0000000109	0+01511960000000209	0+01871460000000309	0-00610660000000409	0+0031526
0000000111	0+01543860000000211	0+01889960000000311	0-00458560000000411	0+0030406
0000000113	0+01553660000000213	0+01623360000000313	0-00458060000000413	0+0037276
0000000115	0+01640060000000215	0+01623460000000315	0-00448760000000415	0+0029306
0000000117	0+01752060000000217	0+01616360000000317	0-00449860000000417	0+0036386
0000000119	0+01721060000000219	0+01616660000000319	0-00440460000000419	0+0033076
0000000121	0+01856160000000221	0+01975660000000321	0-00439660000000421	0+0029816
0000000123	0+01885060000000223	0+01960660000000323	0-00447660000000423	0+0037376
0000000125	0+01920360000000225	0+02137760000000325	0-00444760000000425	0+0031106
0000000127	0+01938560000000227	0+02131660000000327	0-00447460000000427	0+0036276
0000000129	0+01934560000000229	0+02147160000000329	0-00444560000000429	0+0035686
0000000131	0+01259160000000231	0+02121460000000331	0-00479760000000431	0+0031466
0000000133	0+01164460000000233	0+02091260000000333	0-00453160000000433	0+0036586
0000000135	0+01489960000000235	0+02117060000000335	0-00531660000000435	0+0030756
0000000137	0+01674260000000237	0+02140760000000337	0-00460360000000437	0+0035496
0000000139	0+01796960000000239	0+02135660000000339	0-00507860000000439	0+0035856
0000000141	0+01710460000000241	0+01791260000000341	0-00741160000000441	0+0008936
0000000143	0+01710460000000243	0+01791160000000343	0-00741160000000443	0+0008946
0000000145	0+03534660000000245	0+03651960000000345	0-00060960000000445	0+0077606
0000000147	0+05386960000000247	0+05535260000000347	0+00628860000000447	0+0147236

24. Test 20822lJ14860

0000000208	2215148600000000057	0+00290760000000058	0+00277860000000059	0+0000136
0000000060	0+00116760000000061	0+00116860000000062	0+00116760000000063	0+0011695
0000000064	0+00311960000000065	0+00307260000000066	0+00294060000000067	0+0029176
0000000068	0+00293560000000069	0+00287860000000070	0+00283860000000071	0+0028216
0000000072	0+00284860000000073	0+00282860000000074	0+00303660000000075	0+0030846
0000000076	0+00286160000000077	0+00299760000000078	0+00312560000000079	0+0032196
0000000080	0+00301760000000081	0+00317160000000082	0+00293060000000083	0+0030876
0000000084	0+00287960000000085	0+00296960000000086	0+00304660000000087	0+0029666
0000000088	0+00300060000000089	0+00286160000000090	0+00290560000000091	0+0029786
0000000092	0+00279760000000093	0+00293160000000094	0+00288860000000095	0+0198956
0000000096	0+00296960000000097	0+00287860000000098	0+00294960000000099	0F0012533
0000000101	0+01710460000000201	0+01791460000000301	0-00740860000000401	0+0031046
0000000103	0+01625760000000203	0+01705160000000303	0-00740860000000403	0+0033146
0000000105	0+01707860000000205	0+01788660000000305	0-00690060000000405	0+0027416
0000000107	0+01578760000000207	0+01656960000000307	0-00638560000000407	0+0035256
0000000109	0+01507360000000209	0+01809160000000309	0-00623860000000409	0+0029426
0000000111	0+01538360000000211	0+01836660000000311	0-00460560000000411	0+0029896
0000000113	0+01552260000000213	0+01619660000000313	0-00461860000000413	0+0034996
0000000115	0+01635060000000215	0+01618860000000315	0-00449360000000415	0+0027336
0000000117	0+01742960000000217	0+01611960000000317	0-00451160000000417	0+0035956
0000000119	0+01719660000000219	0+01611760000000319	0-00441560000000419	0+0030526
0000000121	0+01843260000000221	0+01966760000000321	0-00443860000000421	0+0030286
0000000123	0+01872360000000223	0+01952960000000323	0-00448260000000423	0+0036616
0000000125	0+01905860000000225	0+02083460000000325	0-00447360000000425	0+0027966
0000000127	0+01932360000000227	0+02075860000000327	0-00448960000000427	0+0036286
0000000129	0+01923560000000229	0+02094360000000329	0-00449260000000429	0+0032846
0000000131	0+01241760000000231	0+02068760000000331	0-00489560000000431	0+0030656
0000000133	0+01073860000000233	0+02034860000000333	0-00478960000000433	0+0036366
0000000135	0+01418260000000235	0+02059160000000335	0-00541460000000435	0+0028386
0000000137	0+01629460000000237	0+02088260000000337	0-00469860000000437	0+0035166
0000000139	0+01734960000000239	0+02085660000000339	0-00519560000000439	0+0034636
0000000141	0+01710460000000241	0+01791260000000341	0-00740960000000441	0+0008946
0000000143	0+01710460000000243	0+01791260000000343	0-00741060000000443	0+0008956
0000000145	0+03534360000000245	0+03651460000000345	0-00060660000000445	0+0077596
0000000147	0+05386360000000247	0+05533560000000347	0+00628960000000447	0+0147256

25. Test 208221614460

0000000208	22161'460000000057	0+0028976000000058	0+0027796000000059	0+0000136
0000000060	0+0011466000000061	0+0011416000000062	0+0011436000000063	0+0011476
0000000064	0+0030946000000065	0+0030356000000066	0+0029046000000067	0+0028816
0000000068	0+0029106000000069	0+0028476000000070	0+0028076000000071	0+0027936
0000000072	0+0028176000000073	0+0027966000000074	0+0029936000000075	0+0030706
0000000076	0+0028176000000077	0+0029586000000078	0+0030946000000079	0+0031876
0000000080	0+0030046000000081	0+0031326000000082	0+0029056000000083	0+0030556
0000000084	0+0028346000000085	0+0029436000000086	0+0029906000000087	0+0029186
0000000088	0+0029536000000089	0+0028216000000090	0+0028836000000091	0+0029266
0000000092	0+0028026000000093	0+0028816000000094	0+0028576000000095	0+0237256
0000000096	0+0029336000000097	0+0028806000000098	0+0029026000000099	0F0012523
0000000101	0+0171056000000201	0+0179156000000301	0-0074096000000401	0+0027366
0000000103	0+0162626000000203	0+0170506000000303	0-0074096000000403	0+0032636
0000000105	0+0170766000000205	0+0178866000000305	0-0075286000000405	0+0024676
0000000107	0+0157556000000207	0+0165456000000307	0-0068056000000407	0+0032576
0000000109	0+0150536000000209	0+0168686000000309	0-0065956000000409	0+0027906
0000000111	0+0153616000000211	0+0175976000000311	0-0046126000000411	0+0026016
0000000113	0+0155126000000213	0+0161886000000313	0-0046126000000413	0+0034556
0000000115	0+0163466000000215	0+0161816000000315	0-0045006000000415	0+0024766
0000000117	0+0174056000000217	0+0161076000000317	0-0045086000000417	0+0033416
0000000119	0+0171916000000219	0+0161086000000319	0-0044176000000419	0+0028996
0000000121	0+0183946000000221	0+0195476000000321	0-0044326000000421	0+0027146
0000000123	0+0186816000000223	0+0134866000000323	0-0044836000000423	0+0036656
0000000125	0+0190426000000225	0+0201396000000325	0-0044676000000425	0+0026106
0000000127	0+0192756000000227	0+0199796000000327	0-0044866000000427	0+0035306
0000000129	0+0191796000000229	0+0202226000000329	0-0044906000000429	0+0031766
0000000131	0+0123126000000231	0+0199676000000331	0-0052946000000431	0+0028856
0000000133	0+0102356000000233	0+0195836000000333	0-0048306000000433	0+0036276
0000000135	0+0111996000000235	0+0198066000000335	0-0056736000000435	0+0026916
0000000137	0+0130696000000237	0+0201416000000337	0-0048876000000437	0+0034836
0000000139	0+0153216000000239	0+0201226000000339	0-0053356000000439	0+0033676
0000000141	0+0171036000000241	0+0179136000000341	0-0074106000000441	0+0008976
0000000143	0+0171056000000243	0+0179136000000343	0-0074105000000443	0+0008976
0000000145	0+0353506000000245	0+0355246000000345	0-0006036000000445	0+0077646
0000000147	0+0538546000000247	0+0553525000000347	0+0062896000000447	0+0147266

26. Test 208221713660

0000000208	2217136500000000057	0+002914600000000058	0+002781600000000059	0+0000126
0000000060	0+001149600000000061	0+001144600000000062	0+001144600000000063	0+0011486
0000000064	0+003090600000000065	0+003037600000000066	0+002901600000000067	0+0028796
0000000068	0+002908600000000069	0+002844600000000070	0+002807500000000071	0+0027936
0000000072	0+002818600000000073	0+002796600000000074	0+002954600000000075	0+0030736
0000000076	0+002773600000000077	0+002916600000000078	0+003097600000000079	0+0031836
0000000080	0+003014600000000081	0+003124600000000082	0+002862600000000083	0+0030676
0000000084	0+002796600000000085	0+002943500000000086	0+002981600000000087	0+0028746
0000000088	0+002967600000000089	0+002794600000000090	0+002886600000000091	0+0029356
0000000092	0+002759600000000093	0+002903600000000094	0+002840600000000095	0+0237366
0000000096	0+002954600000000097	0+002872600000000098	0+002911500000000099	0F0012533
0000000101	0+017101600000000201	0+017913600000000301	0-007409600000000401	0+0023646
0000000103	0+016267600000000203	0+017047600000000303	0-007409600000000403	0+0031506
0000000105	0+017075600000000205	0+017836600000000305	0-007851600000000405	0+0021506
0000000107	0+015762600000000207	0+016557600000000307	0-007117600000000407	0+0030286
0000000109	0+015057600000000209	0+015032600000000309	0-006958600000000409	0+0026246
0000000111	0+015357600000000211	0+015836600000000311	0-004620600000000411	0+0022196
0000000113	0+015505600000000213	0+016170600000000313	0-004618600000000413	0+0033336
0000000115	0+016328600000000215	0+015167600000000315	0-004509600000000415	0+0021526
0000000117	0+017378600000000217	0+016098500000000317	0-004512600000000417	0+0030706
0000000119	0+017188600000000219	0+016105500000000319	0-004425600000000419	0+0027146
0000000121	0+018374600000000221	0+019529600000000321	0-004440600000000421	0+0023806
0000000123	0+018656600000000223	0+019450600000000323	0-004490600000000423	0+0035796
0000000125	0+019025600000000225	0+019205600000000325	0-004474600000000425	0+0022706
0000000127	0+019252600000000227	0+019028600000000327	0-004493600000000427	0+0032756
0000000129	0+019151600000000229	0+019277600000000329	0-004495600000000429	0+0029696
0000000131	0+012283600000000231	0+019020500000000331	0-005643600000000431	0+0025416
0000000133	0+010159600000000233	0+018601600000000333	0-004922600000000433	0+0035706
0000000135	0+010556600000000235	0+018818600000000335	0-005966600000000435	0+0023756
0000000137	0+012030600000000237	0+019176600000000337	0-005070600000000437	0+0032706
0000000139	0+013623600000000239	0+019155600000000339	0-005532600000000439	0+0031526
0000000141	0+017101600000000241	0+017912600000000341	0-007410600000000441	0+0008986
0000000143	0+017101600000000243	0+017912600000000343	0-007410600000000443	0+0008996
0000000145	0+035346600000000245	0+036521600000000345	0-000604600000000445	0+0077666
0000000147	0+053873600000000247	0+055358600000000347	0+006293600000000447	0+0147286

27. Test 208221812760

0000000208	221812760000000057	0+0029316000000058	0+0027826000000059	0+0000126
0000000060	0+0011566000000061	0+0011526000000062	0+0011536000000063	0+0011566
0000000064	0+0030986000000065	0+0030436000000066	0+0029066000000067	0+0028856
0000000068	0+0029146000000069	0+0028496000000070	0+0028156000000071	0+0027986
0000000072	0+0028256000000073	0+0028056000000074	0+0029156000000075	0+0030846
0000000076	0+0027416000000077	0+0028766000000078	0+0031186000000079	0+0031916
0000000080	0+0030176000000081	0+0031316000000082	0+0028186000000083	0+0030936
0000000084	0+0027596000000085	0+0029566000000086	0+0029846000000087	0+0028366
0000000088	0+0029956000000089	0+0027746000000090	0+0028996000000091	0+0029516
0000000092	0+0027396000000093	0+0029316000000094	0+0028296000000095	0+0247886
0000000096	0+0029886000000097	0+0028756000000098	0+0029206000000099	0F0012533
0000000101	0+0171026000000201	0+0179136000000301	0-0074106000000401	0+0020866
0000000103	0+0162606000000203	0+0170596000000303	0-0074106000000403	0+0030986
0000000105	0+0170746000000205	0+0178846000000305	0-0080866000000405	0+0019186
0000000107	0+0157756000000207	0+0165506000000307	0-0073136000000407	0+0028996
0000000109	0+0150526000000209	0+0138096000000309	0-0072056000000409	0+0024966
0000000111	0+0153506000000211	0+0145526000000311	0-0046216000000411	0+0019696
0000000113	0+0155006000000213	0+0161696000000313	0-0046226000000413	0+0032806
0000000115	0+0163216000000215	0+0161726000000315	0-0045086000000415	0+0018896
0000000117	0+0173816000000217	0+0161046000000317	0-0045156000000417	0+0029356
0000000119	0+0171886000000219	0+0160386000000319	0-0044316000000419	0+0025166
0000000121	0+0183726000000221	0+0195246000000321	0-0044436000000421	0+0021046
0000000123	0+0186456000000223	0+0194516000000323	0-0044956000000423	0+0034976
0000000125	0+0190156000000225	0+0185076000000325	0-0044776000000425	0+0019786
0000000127	0+0192476000000227	0+0183136000000327	0-0044976000000427	0+0031686
0000000129	0+0191546000000229	0+0185906000000329	0-0044976000000429	0+0027706
0000000131	0+0122776000000231	0+0183136000000331	0-0058836000000431	0+0022436
0000000133	0+0101256000000233	0+0178506000000333	0-0049676000000433	0+0034836
0000000135	0+0099126000000235	0+0131066000000335	0-0061565000000435	0+0020786
0000000137	0+0113996000000237	0+0184585000000337	0-0051496000000437	0+0031546
0000000139	0+0125576000000239	0+0184536000000339	0-0056456000000439	0+0029516
0000000141	0+0171036000000241	0+0179126000000341	0-0074116000000441	0+0009006
0000000143	0+0171036000000243	0+0179126000000343	0-0074106000000443	0+0009006
0000000145	0+0353486000000245	0+0365146000000345	0-0006086000000445	0+0077656
0000000147	0+0538686000000247	0+0553556000000347	0+0062936000000447	0+0147316

28. Test 208221911060

0000000208	2219110600000000057	0+002948600000000058	0+002780600000000059	0+0000136
0000000060	0+001144600000000061	0+001140600000000062	0+001142600000000063	0+0011446
0000000064	0+003088600000000065	0+003029600000000066	0+002893600000000067	0+0028746
0000000068	0+002903600000000069	0+002837500000000070	0+002802500000000071	0+0027846
0000000072	0+002812600000000073	0+002793600000000074	0+002832600000000075	0+0030866
0000000076	0+002668600000000077	0+002809600000000078	0+003136600000000079	0+0032116
0000000080	0+003004600000000081	0+003134600000000082	0+002740600000000083	0+0031176
0000000084	0+002680600000000085	0+002945600000000086	0+002969600000000087	0+0027526
0000000088	0+003016600000000089	0+002719600000000090	0+002901600000000091	0+0029486
0000000092	0+002679600000000093	0+002939600000000094	0+002803600000000095	0+0300326
0000000096	0+003011600000000097	0+002853600000000098	0+002935600000000099	0F0012533
0000000101	0+017103600000000201	0+017914600000000301	0-007410600000000401	0+0017536
0000000103	0+016252600000000203	0+017057600000000303	0-007410600000000403	0+0030696
0000000105	0+017072600000000205	0+017835600000000305	0-008579600000000405	0+0015236
0000000107	0+015775600000000207	0+016549600000000307	0-007575600000000407	0+0027146
0000000109	0+015053600000000209	0+012253500000000309	0-007498600000000409	0+0022696
0000000111	0+015349600000000211	0+012864600000000311	0-004621600000000411	0+0016086
0000000113	0+015505600000000213	0+016174600000000313	0-004617600000000413	0+0031726
0000000115	0+016330600000000215	0+016172600000000315	0-004507600000000415	0+0014406
0000000117	0+017385600000000217	0+016106600000000317	0-004512600000000417	0+0026936
0000000119	0+017190600000000219	0+016099600000000319	0-004427600000000419	0+0022046
0000000121	0+018368600000000221	0+019533500000000321	0-004439600000000421	0+0017106
0000000123	0+018651600000000223	0+019455600000000323	0-004491600000000423	0+0033036
0000000125	0+019023600000000225	0+017509600000000325	0-004471600000000425	0+0015406
0000000127	0+019251600000000227	0+017312600000000327	0-004495600000000427	0+0028846
0000000129	0+019150600000000229	0+017611600000000329	0-004495600000000429	0+0024806
0000000131	0+012272600000000231	0+017301600000000331	0-006108600000000431	0+0018236
0000000133	0+010103600000000233	0+016749600000000333	0-004935600000000433	0+0033086
0000000135	0+008763600000000235	0+017078600000000335	0-006454600000000435	0+0016866
0000000137	0+010680600000000237	0+017499600000000337	0-005251600000000437	0+0029296
0000000139	0+011249600000000239	0+017397600000000339	0-005809600000000439	0+0026746
0000000141	0+017102600000000241	0+017912600000000341	0-007411600000000441	0+0009026
0000000143	0+017102600000000243	0+017912600000000343	0-007411600000000443	0+0009016
0000000145	0+035344600000000245	0+036514600000000345	0-000607600000000445	0+0077666
0000000147	0+053866600000000247	0+055354600000000347	0+006289600000000447	0+0147346

30. Test 208222101060

0000000208	222101060000000057	0+0029396000000058	0+0027786000000059	0+0000136
0000000060	0+0011556000000061	0+0011536000000062	0+0011526000000063	0+0011556
0000000064	0+0030956000000065	0+0030406000000066	0+0029046000000067	0+0028836
0000000068	0+0029156000000069	0+0028496000000070	0+0028156000000071	0+0027976
0000000072	0+0028236000000073	0+0028056000000074	0+0027375000000075	0+0031206
0000000076	0+0026006000000077	0+0028826000000078	0+0032676000000079	0+0032416
0000000080	0+0030396000000081	0+0031386000000082	0+0027346000000083	0+0032306
0000000084	0+0025166000000085	0+0030036000000086	0+0029406000000087	0+0026086
0000000088	0+0030366000000089	0+0025936000000090	0+0029546000000091	0+0029506
0000000092	0+0026356000000093	0+0030326000000094	0+0027026000000095	0+0289286
0000000096	0+0029656000000097	0+0029006000000098	0+0030506000000099	0F0012543
0000000101	0+0171036000000201	0+0179156000000301	0-0074116000000401	0+0013776
0000000103	0+0152696000000203	0+0170635000000303	0-0074116000000403	0+0026276
0000000105	0+0170756000000205	0+0178876000000305	0-0094376000000405	0+0008446
0000000107	0+0157756000000207	0+0165635000000307	0-0080396000000407	0+0025626
0000000109	0+0150556000000209	0+0098536000000309	0-0079256000000409	0+0014876
0000000111	0+0153606000000211	0+0101406000000311	0-0046236000000411	0+0011646
0000000113	0+0155096000000213	0+0161726000000313	0-0046246000000413	0+0026716
0000000115	0+0163305000000215	0+0161666000000315	0-0045146000000415	0+0007516
0000000117	0+0173726000000217	0+0160956000000317	0-0045196000000417	0+0025616
0000000119	0+0171886000000219	0+0151016000000319	0-0044316000000419	0+0014416
0000000121	0+0183696000000221	0+0196316000000321	0-0044446000000421	0+0012885
0000000123	0+0186466000000223	0+0194636000000323	0-0044976000000423	0+0029726
0000000125	0+0190196000000225	0+0156355000000325	0-0044766000000425	0+0008286
0000000127	0+0192456000000227	0+0153906000000327	0-0044996000000427	0+0028266
0000000129	0+0191466000000229	0+0157566000000329	0-0044996000000429	0+0016326
0000000131	0+0122676000000231	0+0153396000000331	0-0062656000000431	0+0015846
0000000133	0+0100946000000233	0+0147156000000333	0-0052016000000433	0+0031586
0000000135	0+0055906000000235	0+0151776000000335	0-0070216000000435	0+0010106
0000000137	0+0084936000000237	0+0156386000000337	0-0053076000000437	0+0029576
0000000139	0+0093056000000239	0+0154526000000339	0-0065906000000439	0+0018406
0000000141	0+0171026000000241	0+0179126000000341	0-0074116000000441	0+0009046
0000000143	0+0171046000000243	0+0179136000000343	0-0074116000000443	0+0009046
0000000145	0+0353506000000245	0+0365196000000345	0-0006056000000445	0+0077736
0000000147	0+0538746000000247	0+0553606000000347	0+0062966000000447	0+0147296

30. Test 208222101060

0000000208	2221010600000000057	0+0029396000000058	0+0027786000000059	0+0000136
0000000060	0+0011556000000061	0+0011536000000062	0+0011526000000063	0+0011556
0000000064	0+0030956000000065	0+0030406000000066	0+0029046000000067	0+0028836
0000000068	0+0029156000000069	0+0028496000000070	0+0028156000000071	0+0027976
0000000072	0+0028236000000073	0+0028056000000074	0+0027376000000075	0+0031206
0000000076	0+0026006000000077	0+0023826000000078	0+0032676000000079	0+0032416
0000000080	0+0030396000000081	0+0031386000000082	0+0027346000000083	0+0032306
0000000084	0+0025166000000085	0+0030036000000086	0+0029406000000087	0+0026086
0000000088	0+0030866000000089	0+0025936000000090	0+0029546000000091	0+0029506
0000000092	0+0026356000000093	0+0030326000000094	0+0027026000000095	0+0289286
0000000096	0+0029656000000097	0+0029006000000098	0+0030506000000099	0F0012543
0000000101	0+0171036000000201	0+0179156000000301	0-0074116000000401	0+0013776
0000000103	0+0152696000000203	0+0170636000000303	0-0074116000000403	0+0026276
0000000105	0+0170756000000205	0+0178876000000305	0-0094376000000405	0+0008446
0000000107	0+0157756000000207	0+0165636000000307	0-0080396000000407	0+0025626
0000000109	0+0150556000000209	0+0098536000000309	0-0079256000000409	0+0014876
0000000111	0+0153606000000211	0+0101406000000311	0-0046236000000411	0+0011646
0000000113	0+0155096000000213	0+0151726000000313	0-0046246000000413	0+0026716
0000000115	0+0163306000000215	0+0161666000000315	0-0045146000000415	0+0007516
0000000117	0+0173726000000217	0+0160956000000317	0-0045196000000417	0+0025616
0000000119	0+0171886000000219	0+0151016000000319	0-0044316000000419	0+0014416
0000000121	0+0183696000000221	0+0193316000000321	0-0044446000000421	0+0012885
0000000123	0+0186456000000223	0+0194636000000323	0-0044976000000423	0+0029726
0000000125	0+0190196000000225	0+0156356000000325	0-0044766000000425	0+0008286
0000000127	0+0192456000000227	0+0153906000000327	0-0044996000000427	0+0028266
0000000129	0+0191466000000229	0+0157566000000329	0-0044996000000429	0+0016326
0000000131	0+0122676000000231	0+0153396000000331	0-0062656000000431	0+0015846
0000000133	0+0100946000000233	0+0147156000000333	0-0052016000000433	0+0031586
0000000135	0+0065906000000235	0+0151776000000335	0-0070216000000435	0+0010106
0000000137	0+0084936000000237	0+0153866000000337	0-0053076000000437	0+0029576
0000000139	0+0093056000000239	0+0154526000000339	0-0065906000000439	0+0018406
0000000141	0+0171026000000241	0+0179126000000341	0-0074116000000441	0+0009046
0000000143	0+0171046000000243	0+0179136000000343	0-0074116000000443	0+0009046
0000000145	0+0353506000000245	0+0365196000000345	0-0006056000000445	0+0077736
0000000147	0+0538746000000247	0+0553606000000347	0+0062966000000447	0+0147296

31. Test 208240108070

0000000208	2+01080700000000057	0+00320460000000058	0+00258260000000059	0+0000126
0000000060	0+00093960000000061	0+00093660000000062	0+00093760000000063	0+0009386
0000000064	0+00374060000000065	0+00367460000000066	0+00344460000000067	0+0033926
0000000068	0+00336860000000069	0+00326560000000070	0+00320660000000071	0+0031826
0000000072	0+00323560000000073	0+00321160000000074	0+00328360000000075	0+0036746
0000000076	0+00326460000000077	0+00356260000000078	0+00391760000000079	0+0040246
0000000080	0+00356460000000081	0+00383160000000082	0+00336060000000083	0+0039016
0000000084	0+00300260000000085	0+00350760000000086	0+00357960000000087	0+0031046
0000000088	0+00372060000000089	0+00300450000000090	0+00333260000000091	0+0035746
0000000092	0+00320860000000093	0+00368860000000094	0+00321660000000095	0+0565156
0000000096	0+00325760000000097	0+00340760000000098	0+00350960000000099	0F0014493
0000000101	0+01712160000000201	0+01798360000000301	0-00739160000000401	0+0022786
0000000103	0+01609460000000203	0+01692360000000303	0-00739160000000403	0+0039496
0000000105	0+01708760000000205	0+01794760000000305	0-00884060000000405	0+0009356
0000000107	0+01555460000000207	0+01637360000000307	0-00934660000000407	0+0041716
0000000109	0+01462660000000209	0+00756860000000309	0-00861160000000409	0+0014006
0000000111	0+01517760000000211	0+00763760000000311	0-00326960000000411	0+0020096
0000000113	0+01523460000000213	0+01587960000000313	0-00332860000000413	0+0035366
0000000115	0+01562060000000215	0+01587160000000315	0-00323260000000415	0+0007466
0000000117	0+01808660000000217	0+01580360000000317	0-00322960000000417	0+0040206
0000000119	0+01736360000000219	0+01581560000000319	0-00311260000000419	0+0014586
0000000121	0+01961560000000221	0+02111060000000321	0-00313160000000421	0+0018536
0000000123	0+01999760000000223	0+02081960000000323	0-00311260000000423	0+0034386
0000000125	0+02056360000000225	0+01554360000000325	0-00307860000000425	0+0005606
0000000127	0+02080960000000227	0+01551060000000327	0-00306460000000427	0+0038716
0000000129	0+02057360000000229	0+01558260000000329	0-00304860000000429	0+0014826
0000000131	0+01223360000000231	0+01486660000000331	0-00537160000000431	0+0023886
0000000133	0+00382160000000233	0+01413360000000333	0-00419660000000433	0+0038506
0000000135	0+00710360000000235	0+01509560000000335	0-00674860000000435	0+0006626
0000000137	0+00544160000000237	0+01539160000000337	0-00404460000000437	0+0038196
0000000139	0+00677260000000239	0+01504360000000339	0-00704960000000439	0+0019776
0000000141	0+01711960000000241	0+01797960000000341	0-00739360000000441	0+0009636
0000000143	0+01711960000000243	0+01738060000000343	0-00739360000000443	0+0009636
0000000145	0+03532460000000245	0+03662160000000345	0-00060360000000445	0+0078156
0000000147	0+05379760000000247	0+05545960000000347	0+00627760000000447	0+0147590

32. Test 208240215670

0000000208	240215670000000057	0+003310600000000058	0+002568600000000059	0+0000126
0000000060	0+000947600000000061	0+000943600000000062	0+000944600000000063	0+0009446
0000000064	0+003730600000000065	0+003721600000000066	0+003497600000000067	0+0034396
0000000068	0+003409600000000069	0+003317600000000070	0+003249600000000071	0+0032176
0000000072	0+003262600000000073	0+003233600000000074	0+003647600000000075	0+0035826
0000000076	0+003305600000000077	0+003468600000000078	0+003626600000000079	0+0038056
0000000080	0+003483600000000081	0+003755600000000082	0+003385600000000083	0+0035676
0000000084	0+003449600000000085	0+003418600000000086	0+003626600000000087	0+0035986
0000000088	0+003520600000000089	0+003317600000000090	0+003345600000000091	0+0035406
0000000092	0+003232600000000093	0+003461600000000094	0+003299600000000095	0+0418976
0000000096	0+003490600000000097	0+003284600000000098	0+003433600000000099	0F0014483
0000000101	0+017118600000000201	0+017979600000000301	0-007395600000000401	0+0041146
0000000103	0+016104600000000203	0+016932600000000303	0-007395600000000403	0+0050246
0000000105	0+017086600000000205	0+017346600000000305	0-005065600000000405	0+0038456
0000000107	0+015567600000000207	0+016390600000000307	0-005458600000000407	0+0049416
0000000109	0+014646600000000209	0+020254600000000309	0-005285600000000409	0+0042676
0000000111	0+015199600000000211	0+020804600000000311	0-003241600000000411	0+0038916
0000000113	0+015245600000000213	0+015909600000000313	0-003320600000000413	0+0049736
0000000115	0+016655600000000215	0+015912600000000315	0-003227600000000415	0+0039286
0000000117	0+018132600000000217	0+015846600000000317	0-003211600000000417	0+0048006
0000000119	0+017367600000000219	0+015843600000000319	0-003088600000000419	0+0043976
0000000121	0+019683600000000221	0+021125600000000321	0-003128600000000421	0+0038646
0000000123	0+020122600000000223	0+020891600000000323	0-003102600000000423	0+0049826
0000000125	0+020622600000000225	0+023675600000000325	0-003061600000000425	0+0041136
0000000127	0+020897600000000227	0+023512600000000327	0-003048600000000427	0+0046666
0000000129	0+020682600000000229	0+023780600000000329	0-003038600000000429	0+0046266
0000000131	0+012354600000000231	0+023485600000000331	0-003863600000000431	0+0040286
0000000133	0+009987600000000233	0+023039600000000333	0-003255600000000433	0+0049826
0000000135	0+015096600000000235	0+023313600000000335	0-004340600000000435	0+0042146
0000000137	0+017351600000000237	0+023674600000000337	0-003343600000000437	0+0046496
0000000139	0+018852600000000239	0+023521600000000339	0-004080600000000439	0+0048166
0000000141	0+017120600000000241	0+017977600000000341	0-007396600000000441	0+0009636
0000000143	0+017118600000000243	0+017977600000000343	0-007395600000000443	0+0009626
0000000145	0+035333600000000245	0+036618600000000345	0-000604600000000445	0+0078166
0000000147	0+053805600000000247	0+055473600000000347	0+005278600000000447	0+0147666

33. Test 208240315570

0000000208	2403155700000000057	0+0033186000000058	0+0025696000000059	0+0000126
0000000060	0+0009496000000061	0+0009456000000062	0+0009466000000063	0+0009466
0000000064	0+0037826000000065	0+0037146000000066	0+0034906000000067	0+0034306
0000000068	0+0034026000000069	0+0033066000000070	0+0032426000000071	0+0032146
0000000072	0+0032626000000073	0+0032346000000074	0+0036416000000075	0+0035886
0000000076	0+0032956000000077	0+0034546000000078	0+0036276000000079	0+0038126
0000000080	0+0034836000000081	0+0037586000000082	0+0033696000000083	0+0035636
0000000084	0+0034296000000085	0+0034166000000086	0+0036256000000087	0+0035806
0000000088	0+0035146000000089	0+0032966000000090	0+0033466000000091	0+0035386
0000000092	0+0032236000000093	0+0034596000000094	0+0032986000000095	0+0357316
0000000096	0+0034936000000097	0+0032976000000098	0+0034306000000099	0F0014493
0000000101	0+0171176000000201	0+0179766000000301	0-0073956000000401	0+0040086
0000000103	0+0160876000000203	0+0169436000000303	0-0073966000000403	0+0049596
0000000105	0+0170786000000205	0+0179416000000305	0-0061366000000405	0+0037486
0000000107	0+0155646000000207	0+0163726000000307	0-0055516000000407	0+0048726
0000000109	0+0146316000000209	0+0197966000000309	0-0053956000000409	0+0042156
0000000111	0+0151866000000211	0+0203786000000311	0-0032486000000411	0+0037746
0000000113	0+0152436000000213	0+0159016000000313	0-0033236000000413	0+0049216
0000000115	0+0166416000000215	0+0158966000000315	0-0032306000000415	0+0038206
0000000117	0+0181116000000217	0+0158336000000317	0-0032216000000417	0+0047456
0000000119	0+0173626000000219	0+0158466000000319	0-0031036000000419	0+0043316
0000000121	0+0196466000000221	0+0210946000000321	0-0031346000000421	0+0037496
0000000123	0+0200586000000223	0+0208336000000323	0-0031146000000423	0+0049426
0000000125	0+0205816000000225	0+0233756000000325	0-0030796000000425	0+0040256
0000000127	0+0208436000000227	0+0232196000000327	0-0030706000000427	0+0046396
0000000129	0+0206236000000229	0+0235036000000329	0-0030506000000429	0+0046086
0000000131	0+0123546000000231	0+0232046000000331	0-0039686000000431	0+0039426
0000000133	0+0100566000000233	0+0227276000000333	0-0032606000000433	0+0050106
0000000135	0+0147556000000235	0+0230346000000335	0-0044086000000435	0+0041266
0000000137	0+0167786000000237	0+0233996000000337	0-0034046000000437	0+0046216
0000000139	0+0183806000000239	0+0233506000000339	0-0041136000000439	0+0048296
0000000141	0+0171176000000241	0+0179756000000341	0-0073976000000441	0+0009636
0000000143	0+0171156000000243	0+0179746000000343	0-0073966000000443	0+0009536
0000000145	0+0353276000000245	0+0365216000000345	0-0006026000000445	0+0078176
0000000147	0+0537966000000247	0+0554746000000347	0+0062796000000447	0+0147666

34. Test 208240415370

0000000203	2+0415370000000057	0+0033246000000058	0+0025706000000059	0+0000126
0000000060	0+0009496000000061	0+0009466000000062	0+0009466000000063	0+0009466
0000000064	0+0037696000000065	0+0037056000000066	0+0034766000000067	0+0034216
0000000068	0+0033976000000069	0+0032956000000070	0+0032386000000071	0+0032126
0000000072	0+0032656000000073	0+0032386000000074	0+0036226000000075	0+0035966
0000000076	0+0032656000000077	0+0034376000000078	0+0036306000000079	0+0038296
0000000080	0+0034856000000081	0+0037746000000082	0+0033476000000083	0+0035776
0000000084	0+0033846000000085	0+0034246000000086	0+0036246000000087	0+0035426
0000000088	0+0035356000000089	0+0032856000000090	0+0033576000000091	0+0035456
0000000092	0+0032186000000093	0+0034786000000094	0+0032966000000095	0+0305546
0000000096	0+0034976000000097	0+0033156000000098	0+0034346000000099	0F0014483
0000000101	0+0171156000000201	0+0179766000000301	0-0073956000000401	0+0038106
0000000103	0+0161076000000203	0+0169306000000303	0-0073966000000403	0+0048266
0000000105	0+0170846000000205	0+0179406000000305	0-0063076000000405	0+0035516
0000000107	0+0155446000000207	0+0163565000000307	0-0057576000000407	0+0047256
0000000109	0+0146236000000209	0+0186766000000309	0-0056366000000409	0+0040516
0000000111	0+0151726000000211	0+0192456000000311	0-0032596000000411	0+0035786
0000000113	0+0152356000000213	0+0158876000000313	0-0033226000000413	0+0048686
0000000115	0+0156266000000215	0+0158786000000315	0-0032286000000415	0+0035876
0000000117	0+0180916000000217	0+0158196000000317	0-0032196000000417	0+0045686
0000000119	0+0173576000000219	0+0158386000000319	0-0030996000000419	0+0042036
0000000121	0+0196416000000221	0+0211006000000321	0-0031306000000421	0+0035666
0000000123	0+0200306000000223	0+0208356000000323	0-0031026000000423	0+0049336
0000000125	0+0205856000000225	0+0227376000000325	0-0030676000000425	0+0037796
0000000127	0+0208406000000227	0+0226286000000327	0-0030546000000427	0+0045116
0000000129	0+0205976000000229	0+0229226000000329	0-0030396000000429	0+0045156
0000000131	0+0123446000000231	0+0226216000000331	0-0041326000000431	0+0037636
0000000133	0+0100216000000233	0+0221076000000333	0-0033796000000433	0+0049676
0000000135	0+0142326000000235	0+0224226000000335	0-0045926000000435	0+0039296
0000000137	0+0159126000000237	0+0227996000000337	0-0035286000000437	0+0045326
0000000139	0+0173296000000239	0+0227496000000339	0-0042416000000439	0+0047356
0000000141	0+0171166000000241	0+0179746000000341	0-0073966000000441	0+0009636
0000000143	0+0171166000000243	0+0179746000000343	0-0073966000000443	0+0009636
0000000145	0+0353296000000245	0+0366176000000345	0-0005026000000445	0+0078196
0000000147	0+0538036000000247	0+0554766000000347	0+0062806000000447	0+0147726

35. Test 208240515070

0000000208	2405150700000000057	0+00333960000000058	0+00257160000000059	0+0000126
0000000060	0+00095260000000061	0+00094960000000062	0+00095060000000063	0+0009506
0000000054	0+00375660000000065	0+00358160000000066	0+00346360000000067	0+0034096
0000000068	0+00338560000000069	0+00328160000000070	0+00322360000000071	0+0031986
0000000072	0+00325260000000073	0+00322560000000074	0+00354560000000075	0+0035966
0000000076	0+00322160000000077	0+00341860000000078	0+00362760000000079	0+0038336
0000000080	0+00348560000000081	0+00376260000000082	0+00331060000000083	0+0035746
0000000084	0+00330360000000085	0+00340960000000086	0+00360060000000087	0+0034586
0000000088	0+00353860000000089	0+00324460000000090	0+00335460000000091	0+0035506
0000000092	0+00318560000000093	0+00349350000000094	0+00328360000000095	0+0377076
0000000096	0+00350060000000097	0+00330960000000098	0+00343960000000099	0F0014493
0000000101	0+01711760000000201	0+01797860000000301	0-00739660000000401	0+0035466
0000000103	0+01607660000000203	0+01632850000000303	0-00739560000000403	0+0046706
0000000105	0+01708660000000205	0+01794750000000305	0-00658960000000405	0+0032696
0000000107	0+01554260000000207	0+01636160000000307	0-00604560000000407	0+0045436
0000000109	0+01462060000000209	0+01724060000000309	0-00595860000000409	0+0038596
0000000111	0+01517360000000211	0+01777460000000311	0-00326560000000411	0+0033246
0000000113	0+01524460000000213	0+01589160000000313	0-00332360000000413	0+0047446
0000000115	0+01662960000000215	0+01587560000000315	0-00323060000000415	0+0032356
0000000117	0+01808160000000217	0+01582260000000317	0-00322660000000417	0+0043566
0000000119	0+01735560000000219	0+01582860000000319	0-00311060000000419	0+0039796
0000000121	0+01961960000000221	0+02108760000000321	0-00313560000000421	0+0033306
0000000123	0+02000160000000223	0+02082360000000323	0-00311560000000423	0+0048486
0000000125	0+02055960000000225	0+02194160000000325	0-00307960000000425	0+0034246
0000000127	0+02081260000000227	0+02175960000000327	0-00306960000000427	0+0043376
0000000129	0+02056960000000229	0+02206260000000329	0-00304660000000429	0+0043296
0000000131	0+01232260000000231	0+02176760000000331	0-00441760000000431	0+0035086
0000000133	0+00987160000000233	0+02123460000000333	0-00353060000000433	0+0049416
0000000135	0+01307260000000235	0+02155560000000335	0-00484460000000435	0+0036206
0000000137	0+01454460000000237	0+02196360000000337	0-00365760000000437	0+0044066
0000000139	0+01595760000000239	0+02191050000000339	0-00445360000000439	0+0046196
0000000141	0+01711860000000241	0+01797860000000341	0-00739760000000441	0+0009656
0000000143	0+01711760000000243	0+01797760000000343	0-00739760000000443	0+0009646
0000000145	0+03533960000000245	0+03662660000000345	0-00060260000000445	0+0078216
0000000147	0+05381460000000247	0+05547160000000347	0+00627760000000447	0+0147738

36. Test 208240614270

0000000208	2+06142700000000057	0+00335960000000058	0+00256760000000059	0+0000126
0000000060	0+00095260000000061	0+00094960000000062	0+00095060000000053	0+0009516
0000000064	0+00377660000000065	0+00370060000000066	0+00347460000000067	0+0034196
0000000068	0+00339560000000069	0+00329060000000070	0+00323560000000071	0+0032106
0000000072	0+00326360000000073	0+00324060000000074	0+00345560000000075	0+0036466
0000000076	0+00317260000000077	0+00343060000000078	0+00365960000000079	0+0038846
0000000080	0+00350660000000081	0+00377850000000082	0+00329660000000083	0+0036166
0000000084	0+00322860000000085	0+00342560000000086	0+00359060000000087	0+0033516
0000000088	0+00357860000000089	0+00318750000000090	0+00335060000000091	0+0035646
0000000092	0+00310860000000093	0+00352460000000094	0+00323860000000095	0+0353006
0000000096	0+00351460000000097	0+00329460000000098	0+00344560000000099	0F0014453
0000000101	0+01711660000000201	0+01797850000000301	0-00739760000000401	0+0029926
0000000103	0+01608460000000203	0+01693660000000303	0-00739660000000403	0+0045516
0000000105	0+01708360000000205	0+01794750000000305	0-00731960000000405	0+0027026
0000000107	0+01555460000000207	0+01637460000000307	0-00649560000000407	0+0042036
0000000109	0+01462560000000209	0+01481250000000309	0-00643960000000409	0+0035096
0000000111	0+01517260000000211	0+01528260000000311	0-00327160000000411	0+0028286
0000000113	0+01524660000000213	0+01588860000000313	0-00332460000000413	0+0045726
0000000115	0+01663160000000215	0+01587760000000315	0-00322860000000415	0+0025956
0000000117	0+01810360000000217	0+01582160000000317	0-00321960000000417	0+0040136
0000000119	0+01735560000000219	0+01583060000000319	0-00310360000000419	0+0035096
0000000121	0+01963360000000221	0+02110560000000321	0-00312760000000421	0+0029556
0000000123	0+02000760000000223	0+02082360000000323	0-00310860000000423	0+0046866
0000000125	0+02055960000000225	0+02044760000000325	0-00307450000000425	0+0027226
0000000127	0+02081460000000227	0+02024150000000327	0-00306760000000427	0+0041056
0000000129	0+02056660000000229	0+02057060000000329	0-00304860000000429	0+0038256
0000000131	0+01229660000000231	0+02024550000000331	0-00484660000000431	0+0032546
0000000133	0+00981360000000233	0+01967660000000333	0-00369260000000433	0+0047896
0000000135	0+01117260000000235	0+02001460000000335	0-00532160000000435	0+0029006
0000000137	0+01254760000000237	0+02045460000000337	0-00389160000000437	0+0042136
0000000139	0+01367960000000239	0+02044560000000339	0-00477660000000439	0+0041536
0000000141	0+01711560000000241	0+01797760000000341	0-00739760000000441	0+0009656
0000000143	0+01711660000000243	0+01797760000000343	0-00739760000000443	0+0009656
0000000145	0+03532860000000245	0+03652360000000345	0-00060460000000445	0+0078216
0000000147	0+05381360000000247	0+05547760000000347	0+00628560000000447	0+0147716

37. 208240712570

0000000208	2407125700000000057	0+0033905000000000058	0+0025696000000000059	0+0000126
0000000060	0+00096960000000061	0+0009686000000000062	0+0009686000000000063	0+0009706
0000000064	0+00377560000000065	0+0037086000000000066	0+0034816000000000067	0+0034286
0000000068	0+00341160000000069	0+0033026000000000070	0+0032516000000000071	0+0032246
0000000072	0+00327960000000073	0+0032536000000000074	0+0033716000000000075	0+0037006
0000000076	0+00313860000000077	0+0034776000000000078	0+0038426000000000079	0+0039426
0000000080	0+00357160000000081	0+0038096000000000082	0+0033006000000000083	0+0037976
0000000084	0+00307960000000085	0+0035146000000000086	0+0035666000000000087	0+0032456
0000000088	0+00369160000000089	0+0030486000000000090	0+0034366000000000091	0+0035306
0000000092	0+00369360000000093	0+0036186000000000094	0+0031476000000000095	0+0380616
0000000096	0+00333860000000097	0+0033605000000000098	0+0035426000000000099	0F0014483
0000000101	0+01711960000000201	0+0179826000000000301	0-0073976000000000401	0+0024386
0000000103	0+01610760000000203	0+0169236000000000303	0-0073976000000000403	0+0042526
0000000105	0+01708960000000205	0+0179506000000000305	0-0088466000000000405	0+0017756
0000000107	0+01552960000000207	0+0163596000000000307	0-0071776000000000407	0+0038926
0000000109	0+01461660000000209	0+0112105000000000309	0-0070476000000000409	0+0026446
0000000111	0+01517160000000211	0+0115176000000000311	0-0032806000000000411	0+0022006
0000000113	0+01524360000000213	0+0158905000000000313	0-0033346000000000413	0+0039186
0000000115	0+01662760000000215	0+0158805000000000315	0-0032446000000000415	0+0017316
0000000117	0+01808460000000217	0+0156166000000000317	0-0032306000000000417	0+0036666
0000000119	0+01735860000000219	0+0158336000000000319	0-0031206000000000419	0+0025716
0000000121	0+01962660000000221	0+0211026000000000321	0-0031376000000000421	0+0022656
0000000123	0+01999560000000223	0+0208066000000000323	0-0031256000000000423	0+0041176
0000000125	0+02055260000000225	0+0181396000000000325	0-0030896000000000425	0+0018266
0000000127	0+02080060000000227	0+0178565000000000327	0-0030846000000000427	0+0037046
0000000129	0+02054960000000229	0+0182766000000000329	0-0030646000000000429	0+0028786
0000000131	0+01228460000000231	0+0178605000000000331	0-0051286000000000431	0+0026396
0000000133	0+00985460000000233	0+0170706000000000333	0-0039676000000000433	0+0044336
0000000135	0+00738460000000235	0+0175155000000000335	0-0061206000000000435	0+0019806
0000000137	0+00940760000000237	0+0180486000000000337	0-0039836000000000437	0+0038746
0000000139	0+01047060000000239	0+0179876000000000339	0-0057296000000000439	0+0031996
0000000141	0+01711960000000241	0+0179796000000000341	0-0073986000000000441	0+0009676
0000000143	0+01711960000000243	0+0179806000000000343	0-0073986000000000443	0+0009666
0000000145	0+03533560000000245	0+0365305000000000345	0-0006046000000000445	0+0078226
0000000147	0+05381360000000247	0+0554846000000000347	0+0062766000000000447	0+0147756

38. Test 208240808070

0000000208	24030807000000000057	0+00325160000000058	0+00257160000000059	0+0000126
0000000060	0+00098060000000061	0+00097860000000062	0+00097960000000063	0+0009806
0000000064	0+00378660000000065	0+00371060000000066	0+00349060000000067	0+0034346
0000000068	0+00341760000000069	0+00330960000000070	0+00325960000000071	0+0032336
0000000072	0+00329060000000073	0+00326160000000074	0+00332860000000075	0+0037236
0000000076	0+00330460000000077	0+00350660000000078	0+00395760000000079	0+0040636
0000000080	0+00360560000000081	0+00386660000000082	0+00340860000000083	0+0039306
0000000084	0+00303360000000085	0+00354650000000086	0+00360860000000087	0+0031446
0000000088	0+00376460000000089	0+00304650000000090	0+00337160000000091	0+0035836
0000000092	0+00323360000000093	0+00372460000000094	0+00326650000000095	0+0376916
0000000096	0+00327360000000097	0+00344860000000098	0+00354160000000099	0F0014483
0000000101	0+01711760000000201	0+01797960000000301	0-00739760000000401	0+0022556
0000000103	0+01609360000000203	0+01693460000000303	0-00739760000000403	0+0039726
0000000105	0+01708460000000205	0+01794260000000305	0-00885660000000405	0+0009576
0000000107	0+01554650000000207	0+01637860000000307	0-00935960000000407	0+0041886
0000000109	0+01463160000000209	0+00765660000000309	0-00845560000000409	0+0014176
0000000111	0+01517460000000211	0+00772360000000311	0-00328360000000411	0+0019926
0000000113	0+01525660000000213	0+01538860000000313	0-00333160000000413	0+0034846
0000000115	0+01662660000000215	0+01587960000000315	0-00324560000000415	0+0007726
0000000117	0+01808460000000217	0+01581460000000317	0-00323360000000417	0+0040466
0000000119	0+01735650000000219	0+01582560000000319	0-00312860000000419	0+0014676
0000000121	0+01960860000000221	0+02108360000000321	0-00314360000000421	0+0019196
0000000123	0+01998560000000223	0+02080560000000323	0-00313260000000423	0+0034376
0000000125	0+02053360000000225	0+01565160000000325	0-00309860000000425	0+0005916
0000000127	0+02075960000000227	0+01548060000000327	0-00309760000000427	0+0038986
0000000129	0+02053560000000229	0+01560560000000329	0-00307160000000429	0+0014876
0000000131	0+01228360000000231	0+01484160000000331	0-00539760000000431	0+0025246
0000000133	0+00984660000000233	0+01421350000000333	0-00428660000000433	0+003921[illegible]
0000000135	0+00709360000000235	0+01508560000000335	0-00673060000000435	0+0007126
0000000137	0+00537660000000237	0+01540250000000337	0-00405660000000437	0+0038196
0000000139	0+00588160000000239	0+01503950000000339	0-00698760000000439	0+0019956
0000000141	0+01711560000000241	0+01797760000000341	0-00739860000000441	0+0009686
0000000143	0+01711860000000243	0+01797860000000343	0-00739860000000443	0+0009686
0000000145	0+03532360000000245	0+03661960000000345	0-00060650000000445	0+0078226
0000000147	0+05381560000000247	0+05548360000000347	0+00627660000000447	0+0147756

39. Test 208240900970

0000000208	2409009700000000057	0+00326460000000058	0+00256060000000059	0+0000126
0000000060	0+00098460000000061	0+00098250000000062	0+00098360000000063	0+0009856
0000000064	0+00379250000000065	0+00372360000000066	0+00349750000000067	0+0034456
0000000068	0+00342660000000069	0+00331660000000070	0+00326860000000071	0+0032396
0000000072	0+00329660000000073	0+00326860000000074	0+00352960000000075	0+0037626
0000000076	0+00338060000000077	0+00358160000000078	0+00396460000000079	0+0039606
0000000080	0+00359560000000081	0+00381860000000082	0+00355360000000083	0+0039416
0000000084	0+00310360000000085	0+00351960000000086	0+00353560000000087	0+0032576
0000000088	0+00372760000000089	0+00317060000000090	0+00335460000000091	0+0035426
0000000092	0+00324460000000093	0+00363960000000094	0+00337460000000095	0+0347306
0000000096	0+00339060000000097	0+00346360000000098	0+00345260000000099	0F0014463
0000000101	0+01711960000000201	0+01798360000000301	0-00739860000000401	0+0021956
0000000103	0+01610860000000203	0+01692660000000303	0-00739860000000403	0+0034136
0000000105	0+01708760000000205	0+01734660000000305	0-00886260000000405	0+0010946
0000000107	0+01555560000000207	0+01638460000000307	0-00936860000000407	0+0029646
0000000109	0+01463260000000209	0+00493360000000309	0-00895160000000409	0+0012226
0000000111	0+01517560000000211	0+00503960000000311	0-00329760000000411	0+0019186
0000000113	0+01524760000000213	0+01587560000000313	0-00334560000000413	0+0031136
0000000115	0+01662760000000215	0+01587660000000315	0-00325560000000415	0+0006726
0000000117	0+01808360000000217	0+01582060000000317	0-00324060000000417	0+0029936
0000000119	0+01735560000000219	0+01580460000000319	0-00313760000000419	0+0010286
0000000121	0+01959560000000221	0+02108260000000321	0-00315360000000421	0+0021736
0000000123	0+01997160000000223	0+02080460000000323	0-00314160000000423	0+0033736
0000000125	0+02053460000000225	0+01475160000000325	0-00309960000000425	0+0006016
0000000127	0+02079060000000227	0+01415360000000327	0-00319960000000427	0+0029526
0000000129	0+02054060000000229	0+01492560000000329	0-00307360000000429	0+0009186
0000000131	0+01228660000000231	0+01395160000000331	0-00508860000000431	0+0030676
0000000133	0+00984760000000233	0+01356960000000333	0-00444860000000433	0+0036116
0000000135	0+00708860000000235	0+01402160000000335	0-00580160000000435	0+0012336
0000000137	0+00535260000000237	0+01473360000000337	0-00453160000000437	0+0032826
0000000139	0+00374860000000239	0+01461660000000339	0-00691560000000439	0+0014296
0000000141	0+01711860000000241	0+01797960000000341	0-00739960000000441	0+0009686
0000000143	0-01711960000000243	0+01798160000000343	0-00740060000000443	0+0009696
0000000145	0+03534260000000245	0+03653160000000345	0-00060360000000445	0+0078256
0000000147	0+05382260000000247	0+05549250000000347	0+00628060000000447	0+0147746

40. Test 208241010082

0000000208	2410100820000000057	0+00404760000000058	0+00256460000000059	0+0000126
0000000060	0+00101060000000061	0+00100860000000062	0+00101160000000063	0+0010126
0000000064	0+00515560000000065	0+00504860000000066	0+00462760000000067	0+0045046
0000000058	0+00432360000000069	0+00422160000000070	0+00400560000000071	0+0039476
0000000072	0+00401060000000073	0+00392460000000074	0+00449660000000075	0+0047526
0000000076	0+00414560000000077	0+00452460000000078	0+00506660000000079	0+0051606
0000000080	0+00456650000000081	0+00500760000000082	0+00435560000000083	0+0050456
0000000084	0+00399960000000085	0+00437550000000086	0+00458360000000087	0+0042226
0000000088	0+00480160000000089	0+00395750000000090	0+00415060000000091	0+0043986
0000000092	0+00391060000000093	0+00464060000000094	0+00405860000000095	0+0370666
0000000096	0+00411360000000097	0+00398750000000098	0+00430760000000099	0F0017003
0000000101	0+01712460000000201	0+01798850000000301	0-00739960000000401	0+0034106
0000000103	0+01594360000000203	0+01679560000000303	0-00740060000000403	0+0037156
0000000105	0+01708460000000205	0+01794660000000305	0-00839760000000405	0+0022086
0000000107	0+01535360000000207	0+01617460000000307	0-00835660000000407	0+0040746
0000000109	0+01405260000000209	0+00372250000000309	0-00862460000000409	0+0016476
0000000111	0+01485060000000211	0+00430150000000311	0-00159160000000411	0+0032076
0000000113	0+01490260000000213	0+01557660000000313	0-00194060000000413	0+0039356
0000000115	0+01578560000000215	0+01557850000000315	0-00210860000000415	0+0015946
0000000117	0+01723660000000217	0+01553460000000317	0-00223660000000417	0+0037416
0000000119	0+01721560000000219	0+01556660000000319	0-00194760000000419	0+0015886
0000000121	0+01963160000000221	0+02187560000000321	0-00241560000000421	0+0033576
0000000123	0+02068560000000223	0+02124460000000323	0-00192360000000423	0+0043606
0000000125	0+02119760000000225	0+01490160000000325	0-00215560000000425	0+0016116
0000000127	0+02170760000000227	0+01357660000000327	0-00170960000000427	0+0036786
0000000129	0+02157460000000229	0+01597060000000329	0-00200050000000429	0+0017626
0000000131	0+01169860000000231	0+01430260000000331	0-00398260000000431	0+0042346
0000000133	0+01056360000000233	0+01446060000000333	0-00411360000000433	0+0035626
0000000135	0+00707660000000235	0+01403260000000335	0-00452260000000435	0+0019916
0000000137	0+00572100000000237	0+01568860000000337	0-00359660000000437	0+0044746
0000000139	0+00315560000000239	0+01551260000000339	0-00646360000000439	0+0021526
0000000141	0+01712160000000241	0+01798660000000341	0-00740160000000441	0+0009726
0000000143	0+01712360000000243	0+01798660000000343	0-00740160000000443	0+0009736
0000000145	0+03535460000000245	0+03654560000000345	0-00060160000000445	0+0078306
0000000147	0+05383360000000247	0+05549760000000347	0+00628660000000447	0+0147346

41. Test 208241115882

0000000208	2411156832000000057	0+0042006000000000058	0+002584600000000059	0+0000126
0000000060	0+0010246000000000061	0+0010226000000000062	0+001024600000000063	0+0010266
0000000064	0+005186600000000065	0+0050706000000000066	0+004649600000000067	0+0045286
0000000068	0+004334600000000069	0+0042626000000000070	0+004027600000000071	0+0039516
0000000072	0+003989600000000073	0+0039406000000000074	0+004665600000000075	0+0043956
0000000076	0+004086600000000077	0+0043526000000000078	0+004531600000000079	0+0048276
0000000080	0+004259600000000081	0+0047676000000000082	0+004220600000000083	0+0044716
0000000084	0+004344600000000085	0+0041996000000000086	0+004633600000000087	0+0045546
0000000088	0+004463600000000089	0+0041846000000000090	0+004182600000000091	0+0045456
0000000092	0+004012600000000093	0+0044656000000000094	0+004150600000000095	0+0398526
0000000096	0+004464600000000097	0+0040786000000000098	0+004457600000000099	0F0017003
0000000101	0+017126600000000201	0+0179886000000000301	0-007403600000000401	0+0049296
0000000103	0+015980600000000203	0+0168136000000000303	0-007403600000000403	0+0057386
0000000105	0+017091600000000205	0+0179516000000000305	0-005337600000000405	0+0047066
0000000107	0+015397600000000207	0+0162026000000000307	0-004718600000000407	0+0055766
0000000109	0+014121600000000209	0+0212986000000000309	0-004557600000000409	0+0050556
0000000111	0+014915600000000211	0+0217146000000000311	0-001564600000000411	0+0046996
0000000113	0+015002600000000213	0+0155376000000000313	0-001956600000000413	0+0058316
0000000115	0+015842600000000215	0+0155356000000000315	0-002263600000000415	0+0047226
0000000117	0+017113600000000217	0+0155936000000000317	0-002267600000000417	0+0054606
0000000119	0+017202600000000219	0+0156256000000000319	0-002078600000000419	0+0052696
0000000121	0+019658600000000221	0+0217736000000000321	0-002463600000000421	0+0046856
0000000123	0+020600600000000223	0+0211596000000000323	0-002054600000000423	0+0059326
0000000125	0+021221600000000225	0+0256216000000000325	0-002236600000000425	0+0049736
0000000127	0+021726600000000227	0+0254586000000000327	0-001837600000000427	0+0054926
0000000129	0+021502600000000229	0+0257896000000000329	0-002045600000000429	0+0056206
0000000131	0+011913600000000231	0+0254326000000000331	0-003047600000000431	0+0048646
0000000133	0+011314600000000233	0+0247626000000000333	0-002647600000000433	0+0060936
0000000135	0+017176600000000235	0+0251466000000000335	0-003504600000000435	0+0051716
0000000137	0+018668600000000237	0+0255776000000000337	0-002722600000000437	0+0055756
0000000139	0+019977600000000239	0+0255606000000000339	0-003417600000000439	0+0059426
0000000141	0+017127600000000241	0+0179885000000000341	0-007404500000000441	0+0009736
0000000143	0+017125600000000243	0+0179886000000000343	0-007404600000000443	0+0009726
0000000145	0+035351600000000245	0+0365548500000000345	0-000604600000000445	0+0078326
0000000147	0+053837600000000247	0+0555106000000000347	0+006284600000000447	0+0147886

42. Test 208241215782

0000000208	2412157820000000057	0+0042076000000058	0+0025876000000059	0+0000126
0000000060	0+0010246000000061	0+0010216000000062	0+0010246000000063	0+0010256
0000000064	0+0051856000000065	0+0050526000000066	0+0046506000000067	0+0045146
0000000068	0+0043366000000069	0+0042526000000070	0+0040316000000071	0+0039496
0000000072	0+0039956000000073	0+0039406000000074	0+0046666000000075	0+0044146
0000000076	0+0040736000000077	0+0043446000000078	0+0045276000000079	0+0048506
0000000080	0+0042716000000081	0+0047856000000082	0+0042196000000083	0+0044716
0000000084	0+0043346000000085	0+0042156000000086	0+0046336000000037	0+0045486
0000000088	0+0044496000000089	0+0041826000000090	0+0041876000000091	0+0045496
0000000092	0+0040046000000093	0+0044626000000094	0+0041506000000095	0+0342856
0000000096	0+0044616000000097	0+0040786000000098	0+0044596000000099	0F0016983
0000000101	0+0171246000000201	0+0179896000000301	0-0074036000000401	0+0048326
0000000103	0+0159776000000203	0+0168036000000303	0-0074046000000403	0+0057206
0000000105	0+0170886000000205	0+0179526000000305	0-0054616000000405	0+0045786
0000000107	0+0153846000000207	0+0161926000000307	0-0048596000000407	0+0055526
0000000109	0+0140976000000209	0+0205136000000309	0-0047236000000409	0+0043406
0000000111	0+0148926000000211	0+0209476000000311	0-0016336000000411	0+0045716
0000000113	0+0149586000000213	0+0155136000000313	0-0019576000000413	0+0058006
0000000115	0+0158326000000215	0+0156146000000315	0-0021946000000415	0+0045846
0000000117	0+0171706000000217	0+0155696000000317	0-0022556000000417	0+0054346
0000000119	0+0172056000000219	0+0156096000000319	0-0020116000000419	0+0051446
0000000121	0+0196666000000221	0+0218396000000321	0-0024436000000421	0+0045546
0000000123	0+0206656000000223	0+0212236000000323	0-0019856000000423	0+0059536
0000000125	0+0212246000000225	0+0252406000000325	0-0022006000000425	0+0048186
0000000127	0+0217036000000227	0+0250586000000327	0-0017706000000427	0+0054096
0000000129	0+0215436000000229	0+0254376000000329	0-0020286000000429	0+0055596
0000000131	0+0118366000000231	0+0250676000000331	0-0030936000000431	0+0047126
0000000133	0+0110436000000233	0+0243396000000333	0-0026186000000433	0+0060986
0000000135	0+0165976000000235	0+0247586000000335	0-0035806000000435	0+0050636
0000000137	0+0179236000000237	0+0252226000000337	0-0027686000000437	0+0055126
0000000139	0+0191756000000239	0+0251896000000339	0-0035126000000439	0+0058836
0000000141	0+0171256000000241	0+0173886000000341	0-0074046000000441	0+0009746
0000000143	0+0171326000000243	0+0179896000000343	0-0074056000000443	0+0009736
0000000145	0+0353536000000245	0+0366516000000345	0-0006056000000445	0+0078356
0000000147	0+0538496000000247	0+0555146000000347	0+0062876000000447	0+0147926

43. Test 208241315682

0000000208	2413156820000000057	0+0042416000000058	0+0025766000000059	0+0000126
0000000060	0+0010196000000061	0+0010146000000062	0+0010176000000063	0+0010186
0000000064	0+0051956000000065	0+0050796000000066	0+0045626000000067	0+0045296
0000000068	0+0043586000000069	0+0042436000000070	0+0040116000000071	0+0039666
0000000072	0+0040276000000073	0+0039426000000074	0+0045776000000075	0+0044466
0000000076	0+0040806000000077	0+0043466000000078	0+0045386000000079	0+0048766
0000000080	0+0042966000000081	0+0048006000000082	0+0042136000000083	0+0044726
0000000084	0+0043326000000085	0+0042296000000086	0+0046536000000087	0+0045516
0000000088	0+0044756000000089	0+0041856000000090	0+0042166000000091	0+0045696
0000000092	0+0040116000000093	0+0044856000000094	0+0041616000000095	0+0388586
0000000096	0+0044726000000097	0+0040946000000098	0+0044706000000099	0F0017023
0000000101	0+0171246000000201	0+0179916000000301	0-0074036000000401	0+0047396
0000000103	0+0159696000000203	0+0168196000000303	0-0074036000000403	0+0056646
0000000105	0+0170976000000205	0+0179546000000305	0-0055696000000405	0+0044576
0000000107	0+0153746000000207	0+0161896000000307	0-0049826000000407	0+0055016
0000000109	0+0140726000000209	0+0197586000000309	0-0048736000000409	0+0048546
0000000111	0+0148726000000211	0+0202046000000311	0-0016046000000411	0+0044796
0000000113	0+0149256000000213	0+0155926000000313	0-0019316000000413	0+0057746
0000000115	0+0158136000000215	0+0155916000000315	0-0021136000000415	0+0044406
0000000117	0+0171566000000217	0+0155386000000317	0-0022256000000417	0+0053656
0000000119	0+0172076000000219	0+0155756000000319	0-0019786000000419	0+0050916
0000000121	0+0196846000000221	0+0218536000000321	0-0024276000000421	0+0044286
0000000123	0+0206636000000223	0+0212456000000323	0-0019276000000423	0+0059536
0000000125	0+0212126000000225	0+0248746000000325	0-0021776000000425	0+0046796
0000000127	0+0217176000000227	0+0245756000000327	0-0017386000000427	0+0053156
0000000129	0+0215726000000229	0+0250926000000329	0-0020076000000429	0+0055056
0000000131	0+0117696000000231	0+0247286000000331	0-0031736000000431	0+0045916
0000000133	0+0108036000000233	0+0239466000000333	0-0026486000000433	0+0061596
0000000135	0+0160366000000235	0+0243666000000335	0-0036846000000435	0+0049246
0000000137	0+0172676000000237	0+0248546000000337	0-0027816000000437	0+0054496
0000000139	0+0184356000000239	0+0248356000000339	0-0035726000000439	0+0058796
0000000141	0+0171256000000241	0+0179916000000341	0-0074046000000441	0+0009766
0000000143	0+0171266000000243	0+0179906000000343	0-0074046000000443	0+0009756
0000000145	0+0353466000000245	0+0366416000000345	0-0006086000000445	0+0078346
0000000147	0+0538586000000247	0+0555286000000347	0+0062836000000447	0+0147926

44. Test 208241415582

0000000208	2414155820000000057	0+00424250000000058	0+00258060000000059	0+0000136
0000000060	0+00101960000000061	0+00101550000000062	0+00101860000000063	0+0010196
0000000064	0+00519860000000065	0+00508550000000066	0+00455060000000067	0+0045226
0000000068	0+00434960000000069	0+00424060000000070	0+00401760000000071	0+0039676
0000000072	0+00403360000000073	0+00394460000000074	0+00465960000000075	0+0044576
0000000076	0+00408060000000077	0+00434560000000078	0+00455060000000079	0+0049076
0000000080	0+00431160000000081	0+00482360000000082	0+00420160000000083	0+0044896
0000000084	0+00432160000000085	0+00423960000000086	0+00466560000000087	0+0045336
0000000088	0+00448060000000089	0+00417860000000090	0+00421360000000091	0+0045736
0000000092	0+00400960000000093	0+00448660000000094	0+00416460000000095	0+0340996
0000000096	0+00448160000000097	0+00410160000000098	0+00447360000000099	0F0017043
0000000101	0+01712560000000201	0+01799250000000301	0-00740360000000401	0+0046506
0000000103	0+01597960000000203	0+01580360000000303	0-00740360000000403	0+0056296
0000000105	0+01708560000000205	0+01795350000000305	0-00566760000000405	0+0043266
0000000107	0+01534760000000207	0+01616160000000307	0-00509260000000407	0+0054266
0000000109	0+01405460000000209	0+01916560000000309	0-00500560000000409	0+0047546
0000000111	0+01487060000000211	0+01959560000000311	0-00158060000000411	0+0043566
0000000113	0+01492360000000213	0+01558860000000313	0-00192860000000413	0+0057556
0000000115	0+01580160000000215	0+01559160000000315	0-00208660000000415	0+0043146
0000000117	0+01720960000000217	0+01553660000000317	0-00222260000000417	0+0052626
0000000119	0+01721960000000219	0+01557550000000319	0-00194760000000419	0+0049896
0000000121	0+01970160000000221	0+02189560000000321	0-00242760000000421	0+0043076
0000000123	0+02069560000000223	0+02126750000000323	0-00189460000000423	0+0059546
0000000125	0+02120360000000225	0+02454160000000325	0-00216360000000425	0+0045626
0000000127	0+02172960000000227	0+02433260000000327	0-00170260000000427	0+0052676
0000000129	0+02160360000000229	0+02476260000000329	0-00200360000000429	0+0054276
0000000131	0+01175060000000231	0+02439960000000331	0-00322760000000431	0+0045006
0000000133	0+01068360000000233	0+02358450000000333	0-00266360000000433	0+0061436
0000000135	0+01553960000000235	0+02402060000000335	0-00378760000000435	0+0047666
0000000137	0+01673960000000237	0+02452660000000337	0-00277660000000437	0+0053886
0000000139	0+01786560000000239	0+02450460000000339	0-00369260000000439	0+0057896
0000000141	0+01712560000000241	0+01799160000000341	0-00740560000000441	0+0009756
0000000143	0+01712560000000243	0+01799160000000343	0-00740460000000443	0+0009766
0000000145	0+03535660000000245	0+03655250000000345	0-00060460000000445	0+0078376
0000000147	0+05385860000000247	0+05553360000000347	0+00628450000000447	0+0147956

45. Test 208241515382

0000000208	2415153820000000057	0+00423860000000058	0+00258460000000059	0+0000126
0000000060	0+00102460000000061	0+00102260000000062	0+00102460000000063	0+0010256
0000000064	0+00519960000000065	0+00506960000000066	0+00464960000000067	0+0045286
0000000068	0+00436860000000069	0+00424960000000070	0+00402360000000071	0+0039696
0000000072	0+00404560000000073	0+00395260000000074	0+00461560000000075	0+0044876
0000000076	0+00405060000000077	0+00433060000000078	0+00457860000000079	0+0049526
0000000080	0+00433860000000081	0+00485460000000082	0+00417960000000083	0+0045086
0000000084	0+00429360000000085	0+00425160000000086	0+00467360000000087	0+0044976
0000000088	0+00448960000000089	0+00416260000000090	0+00422960000000091	0+0045766
0000000092	0+00399560000000093	0+00449060000000094	0+00415760000000095	0+0417936
0000000096	0+00448260000000097	0+00410960000000098	0+00447460000000099	0F0017033
0000000101	0+01712460000000201	0+01799360000000301	0-00740360000000401	0+0044366
0000000103	0+01598960000000203	0+01676560000000303	0-00740460000000403	0+0055156
0000000105	0+01708560000000205	0+01795260000000305	0-00589660000000405	0+0040826
0000000107	0+01534460000000207	0+01616160000000307	0-00529660000000407	0+0053246
0000000109	0+01404960000000209	0+01804360000000309	0-00523960000000409	0+0045606
0000000111	0+01486260000000211	0+01839660000000311	0-00156560000000411	0+0041456
0000000113	0+01492060000000213	0+01558460000000313	0-00193560000000413	0+0056326
0000000115	0+01580860000000215	0+01558560000000315	0-00205160000000415	0+0040206
0000000117	0+01721960000000217	0+01553560000000317	0-00222260000000417	0+0051676
0000000119	0+01721460000000219	0+01557460000000319	0-00191460000000419	0+0048266
0000000121	0+01968760000000221	0+02190460000000321	0-00242460000000421	0+0040986
0000000123	0+02070960000000223	0+02129960000000323	0-00186060000000423	0+0059166
0000000125	0+02121460000000225	0+02384860000000325	0-00214660000000425	0+0042066
0000000127	0+02171760000000227	0+02361460000000327	0-00166860000000427	0+0051426
0000000129	0+02162060000000229	0+02407960000000329	0-00200860000000429	0+0052646
0000000131	0+01170760000000231	0+02371760000000331	0-00339560000000431	0+0043186
0000000133	0+01056960000000233	0+02284960000000333	0-00277860000000433	0+0061556
0000000135	0+01456260000000235	0+02328560000000335	0-00402160000000435	0+0044606
0000000137	0+01575760000000237	0+02383560000000337	0-00289160000000437	0+0053156
0000000139	0+01582560000000239	0+02382760000000339	0-00390560000000439	0+0056406
0000000141	0+01712560000000241	0+01799260000000341	0-00740560000000441	0+0009766
0000000143	0+01712760000000243	0+01799260000000343	0-00740460000000443	0+0009776
0000000145	0+03535560000000245	0+03654860000000345	0-00606060000000445	0+0078386
0000000147	0+05338476000000247	0+05554360000000347	0+00628660000000447	0+0147946

46. Test 208241514982

0000000208	2416149820000000057	0+0042166000000058	0+0025906000000059	0+0000136
0000000060	0+0010296000000061	0+0010256000000062	0+0010286000000063	0+0010296
0000000064	0+0052026000000065	0+0050876000000066	0+0046646000000067	0+0045366
0000000068	0+0043686000000069	0+0042536000000070	0+0040336000000071	0+0039786
0000000072	0+0040496000000073	0+0039586000000074	0+0045516000000075	1+0045516
0000000076	0+0040016000000077	0+0043276000000078	0+0046266000000079	0+0050066
0000000080	0+0043636000000081	0+0049006000000082	0+0041536000000083	0+0045706
0000000084	0+0042296000000085	0+0042726000000086	0+0046826000000087	0+0044236
0000000088	0+0045326000000089	0+0041175000000090	0+0042306000000091	0+0045876
0000000092	0+0039496000000093	0+0045136000000094	0+0041246000000095	0+0364576
0000000096	0+0044946000000097	0+0041106000000098	0+0044766000000099	0F0017033
0000000101	0+0171266000000201	0+0179946000000301	0-0074046000000401	0+0040626
0000000103	0+0159516000000203	0+0167756000000303	0-0074046000000403	0+0053026
0000000105	0+0170926000000205	0+0179566000000305	0-0066346000000405	0+0036196
0000000107	0+0153186000000207	0+0161456000000307	0-0056085000000407	0+0051926
0000000109	0+0140376000000209	0+0161816000000309	0-0055726000000409	0+0042036
0000000111	0+0148496000000211	0+0165095000000311	0-0015676000000411	0+0037796
0000000113	0+0149016000000213	0+0155885000000313	0-0019376000000413	1+0054806
0000000115	0+0158136000000215	0+0155866000000315	0-0020566000000415	1+0035116
0000000117	0+0172136000000217	0+0155266000000317	0-0022286000000417	1+0050016
0000000119	0+0172136000000219	0+0155686000000319	0-0019096000000419	0+0044456
0000000121	0+0196806000000221	0+0219136000000321	0-0024316000000421	0+0038106
0000000123	0+0206946000000223	0+0213126000000323	0-0018566000000423	0+0057636
0000000125	0+0212066000000225	0+0226296000000325	0-0021416000000425	0+0036496
0000000127	0+0217386000000227	0+0224036000000327	0-0016646000000427	1+0050446
0000000129	0+0216326000000229	0+0229256000000329	0-0020006000000429	0+0048966
0000000131	0+0116866000000231	0+0225506000000331	0-0036746000000431	0+0041596
0000000133	0+0105136000000233	0+0216036000000333	0-0028446000000433	0+0060736
0000000135	0+0130726000000235	0+0220676000000335	0-0043786000000435	0+0038626
0000000137	0+0142516000000237	0+0226976000000337	0-0029586000000437	0+0052776
0000000139	0+0151266000000239	0+0226956000000339	0-0042206000000439	0+0053146
0000000141	0+0171276000000241	0+0179936000000341	0-0074065000000441	0+0009776
0000000143	0+0171266000000243	0+0179946000000343	0-0074056000000443	0+0009776
0000000145	0+0353576000000245	0+0366506000000345	0-0006066000000445	0+0078396
0000000147	0+0538646000000247	0+0555416000000347	0+0062856000000447	0+0147986

47. Test 208241713282

0000000208	2417132820000000057	0+0041376000000000058	0+0025826000000000059	0+0000126
0000000060	0+0010326000000000061	0+0010296000000000062	0+0010326000000000063	0+0010346
0000000064	0+0051936000000000065	0+0050866000000000066	0+0046596000000000067	0+0045346
0000000068	0+0043586000000000069	0+0042546000000000070	0+0040246000000000071	0+0039736
0000000072	0+0040446000000000073	0+0039556000000000074	0+0043596000000000075	0+0046486
0000000076	0+0040426000000000077	0+0043966000000000078	0+0049796000000000079	0+0051466
0000000080	0+0044856000000000081	0+0049956000000000082	0+0041976000000000083	0+0048966
0000000084	0+0039896000000000085	0+0043996000000000086	0+0046566000000000087	0+0041706
0000000088	0+0047216000000000089	0+0039406000000000090	0+0042346000000000091	0+0045136
0000000092	0+0039656000000000093	0+0046466000000000094	0+0040296000000000095	0+0331646
0000000096	0+0041426000000000097	0+0041636000000000098	0+0044386000000000099	0F0017023
0000000101	0+0171266000000000201	0+0179956000000000301	0-0074056000000000401	0+0035306
0000000103	0+0159416000000000203	0+0167716000000000303	0-0074066000000000403	0+0048726
0000000105	0+0170916000000000205	0+0179586000000000305	0-0083736000000000405	0+0022166
0000000107	0+0153386000000000207	0+0161556000000000307	0-0084976000000000407	0+0050376
0000000109	0+0140436000000000209	0+0106476000000000309	0-0063106000000000409	0+0027566
0000000111	0+0148506000000000211	0+0108016000000000311	0-0015866000000000411	0+0031496
0000000113	0+0149016000000000213	0+0155766000000000313	0-0019476000000000413	0+0047276
0000000115	0+0158006000000000215	0+0155786000000000315	0-0020656000000000415	0+0019456
0000000117	0+0172056000000000217	0+0155276000000000317	0-0022366000000000417	0+0047576
0000000119	0+0172256000000000219	0+0155616000000000319	0-0019226000000000419	0+0028846
0000000121	0+0196786000000000221	0+0219086000000000321	0-0024236000000000421	0+0030596
0000000123	0+0207036000000000223	0+0213096000000000323	0-0018716000000000423	0+0049216
0000000125	0+0211976000000000225	0+0185696000000000325	0-0021426000000000425	0+0018936
0000000127	0+0217066000000000227	0+0183986000000000327	0-0015696000000000427	0+0047526
0000000129	0+0216146000000000229	0+0191446000000000329	0-0020166000000000429	0+0031516
0000000131	0+0116646000000000231	0+0184756000000000331	0-0039666000000000431	0+0035286
0000000133	0+0104796000000000233	0+0173516000000000333	0-0036476000000000433	0+0053906
0000000135	0+0070986000000000235	0+0179446000000000335	0-0054616000000000435	0+0020416
0000000137	0+0069046000000000237	0+0187956000000000337	0-0031376000000000437	0+0049716
0000000139	0+0099706000000000239	0+0187156000000000339	0-0055756000000000439	0+0035486
0000000141	0+0171266000000000241	0+0179936000000000341	0-0074076000000000441	0+0009786
0000000143	0+0171276000000000243	0+0179946000000000343	0-0074066000000000443	0+0009786
0000000145	0+0353526000000000245	0+0366496000000000345	0-0005096000000000445	0+0078376
0000000147	0+0538646000000000247	0+0555286000000000347	0+0062876000000000447	0+0147986

48. Test 208241810082

0000000208	2+18100320000000057	0+00408660000000058	0+00258460000000059	0+0000126
0000000060	0+00102860000000061	0+00102360000000062	0+00102360000000063	0+0010306
0000000064	0+00520360000000065	0+00508160000000066	0+00465760000000067	0+0045276
0000000068	0+00436060000000069	0+00425460000000070	0+00403160000000071	0+0039696
0000000072	0+00404260000000073	0+00394750000000074	0+00453560000000075	0+0047906
0000000076	0+00417560000000077	0+00454960000000078	0+00508960000000079	0+0052116
0000000080	0+00461360000000081	0+00505360000000082	0+00438460000000083	0+0050396
0000000084	0+00401860000000085	0+00440260000000086	0+00462560000000087	0+0042496
0000000088	0+00479960000000089	0+00397660000000090	0+00417060000000091	0+0044356
0000000092	0+00393860000000093	0+00466750000000094	0+00408560000000095	0+0340016
0000000096	0+00414860000000097	0+00402660000000098	0+00436860000000099	0F0017033
0000000101	0+01712760000000201	0+01799560000000301	0-00740660000000401	0+0034196
0000000103	0+01594860000000203	0+01577660000000303	0-00740660000000403	0+0037966
0000000105	0+01709160000000205	0+01795560000000305	0-00837960000000405	0+0021486
0000000107	0+01535560000000207	0+01617660000000307	0-00894960000000407	0+0040746
0000000109	0+01405260000000209	0+00359760000000309	0-00861660000000409	0+0017376
0000000111	0+01485660000000211	0+00428260000000311	0-00157260000000411	0+0030706
0000000113	0+01490560000000213	0+01557560000000313	0-00193760000000413	0+0039856
0000000115	0+01580360000000215	0+01558050000000315	0-00204760000000415	0+0015956
0000000117	0+01719960000000217	0+01552360000000317	0-00223560000000417	0+0037486
0000000119	0+01721660000000219	0+01557160000000319	0-00190760000000419	0+0016546
0000000121	0+01968560000000221	0+02192860000000321	0-00242260000000421	0+0033056
0000000123	0+02073760000000223	0+02133960000000323	0-00185560000000423	0+0043986
0000000125	0+02117360000000225	0+01489460000000325	0-00214460000000425	0+0016196
0000000127	0+02172260000000227	0+01352060000000327	0-00167060000000427	0+0036876
0000000129	0+02161360000000229	0+01611760000000329	0-00200860000000429	0+0019056
0000000131	0+01165760000000231	0+01524660000000331	0-00390460000000431	0+0042886
0000000133	0+01048160000000233	0+01444460000000333	0-00406160000000433	0+0034106
0000000135	0+00708060000000235	0+01400660000000335	0-00456960000000435	0+0020316
0000000137	0+00574160000000237	0+01580460000000337	0-00364960000000437	0+0043636
0000000139	0+00317760000000239	0+01571860000000339	0-00652860000000439	0+0023516
0000000141	0+01713660000000241	0+01799360000000341	0-00740650000000441	0+0009736
0000000143	0+01712760000000243	0+01799360000000343	0-00740760000000443	0+0009736
0000000145	0+03536960000000245	0+03665360000000345	0-00060760000000445	0+0078326
0000000147	0+05386460000000247	0+05553060000000347	0+00628460000000447	0+0147976

49. Test 208241900982

0000000208	2419009820000000057	0+00399060000000058	0+00258860000000059	0+0000126
0000000060	0+00103260000000061	0+00102760000000062	0+00103160000000063	0+0010336
0000000064	0+00518660000000065	0+00509250000000066	0+00465760000000067	0+0045296
0000000068	0+00435760000000069	0+00425560000000070	0+00402160000000071	0+0039676
0000000072	0+00404260000000073	0+00395260000000074	0+00443160000000075	0+0047176
0000000076	0+00405260000000077	0+00442760000000078	0+00501460000000079	0+0050286
0000000080	0+00449260000000081	0+00507960000000082	0+00430060000000083	0+0050136
0000000084	0+00413060000000085	0+00434160000000086	0+00458260000000087	0+0043286
0000000088	0+00481560000000089	0+00408960000000090	0+00410660000000091	0+0043526
0000000092	0+00382560000000093	0+00452060000000094	0+00389060000000095	0+0340586
0000000096	0+00397560000000097	0+00384660000000098	0+00417360000000099	0F0017033
0000000101	0+01712660000000201	0+01799360000000301	0-00740660000000401	0+0039776
0000000103	0+01593160000000203	0+01678560000000303	0-00740550000000403	0+0033376
0000000105	0+01708960000000205	0+01795860000000305	0-00837760000000405	0+0032726
0000000107	0+01533460000000207	0+01615960000000307	0-00894860000000407	0+0036616
0000000109	0+01404360000000209	0+00232760000000309	0-00861360000000409	0+0015056
0000000111	0+01484460000000211	0+00358960000000311	0-00157560000000411	0+0041176
0000000113	0+01489960000000213	0+01556760000000313	0-00195060000000413	0+0031636
0000000115	0+01578360000000215	0+01556360000000315	0-00206060000000415	0+0024146
0000000117	0+01719960000000217	0+01551560000000317	0-00223760000000417	0+0037966
0000000119	0+01722460000000219	0+01556360000000319	0-00191760000000419	0+0012226
0000000121	0+01967660000000221	0+02190460000000321	0-00243560000000421	0+0041896
0000000123	0+02070960000000223	0+02131960000000323	0-00186260000000423	0+0037266
0000000125	0+02119760000000225	0+00682360000000325	0-00214660000000425	0+0017496
0000000127	0+02169560000000227	0+00669450000000327	0-00166660000000427	0+0038966
0000000129	0+02161460000000229	0+00650760000000329	0-00201960000000429	0+0010966
0000000131	0+01166260000000231	0+00623360000000331	0-00446160000000431	0+0041756
0000000133	0+01047560000000233	0+00546650000000333	0-00526360000000433	0+0042236
0000000135	0+00707360000000235	0+00673860000000335	0-00480760000000435	0+0023516
0000000137	0+00574060000000237	0+00553550000000337	0-00467660000000437	0+0038986
0000000139	0+00309460000000239	0+00658760000000339	0-00650760000000439	0+0012636
0000000141	0+01712460000000241	0+01799060000000341	0-00740660000000441	0+0009786
0000000143	0+01712560000000243	0+01799060000000343	0-00740650000000443	0+0009786
0000000145	0+03536160000000245	0+03656160000000345	0-00060560000000445	0+0078406
0000000147	0+05384160000000247	0+05553160000000347	0+00628660000000447	0+0147996

50. Test 208242015460

0000000208	24201546000000000057	0+0027626000000000058	0+0025956000000000059	0+0000126
0000000060	0+0010466000000000061	0+0010426000000000062	0+0010456000000000063	0+0010486
0000000064	0+0030616000000000065	0+0030416000000000066	0+0028876000000000067	0+0028636
0000000068	0+0028486000000000069	0+0028116000000000070	0+0027606000000000071	0+0027386
0000000072	0+0027496000000000073	0+0027336000000000074	0+0030136000000000075	0+0030016
0000000076	0+0027716000000000077	0+0029426000000000078	0+0030326000000000079	0+0031176
0000000080	0+0029186000000000081	0+0030956000000000082	0+0028476000000000083	0+0029986
0000000084	0+0028376000000000085	0+0028556000000000086	0+0029816000000000087	0+0029566
0000000088	0+0029326000000000089	0+0027706000000000090	0+0027886000000000091	0+0029166
0000000092	0+0027046000000000093	0+0028816000000000094	0+0027716000000000095	0+0442756
0000000096	0+0028586000000000097	0+0027686000000000098	0+0028436000000000099	0F0012503
0000000101	0+0171346000000000201	0+0180046000000000301	0-0074066000000000401	0+0034156
0000000103	0+0163296000000000203	0+0171786000000000303	0-0074066000000000403	0+0038576
0000000105	0+0171076000000000205	0+0179776000000000305	0-0064466000000000405	0+0031156
0000000107	0+0158596000000000207	0+0167076000000000307	0-0060576000000000407	0+0038206
0000000109	0+0151706000000000209	0+0193586000000000309	0-0059416000000000409	0+0033946
0000000111	0+0155046000000000211	0+0195326000000000311	0-0045066000000000411	0+0032196
0000000113	0+0155676000000000213	0+0163346000000000313	0-0045026000000000413	0+0038576
0000000115	0+0155036000000000215	0+0163336000000000315	0-0044186000000000415	0+0031546
0000000117	0+0176506000000000217	0+0162696000000000317	0-0044286000000000417	0+0037626
0000000119	0+0172606000000000219	0+0162786000000000319	0-0043346000000000419	0+0034816
0000000121	0+0187526000000000221	0+0199956000000000321	0-0043276000000000421	0+0031976
0000000123	0+0190476000000000223	0+0198506000000000323	0-0043906000000000423	0+0038856
0000000125	0+0193936000000000225	0+0219376000000000325	0-0043596000000000425	0+0032926
0000000127	0+0195736000000000227	0+0218616000000000327	0-0043946000000000427	0+0037536
0000000129	0+0195316000000000229	0+0220166000000000329	0-0043686000000000429	0+0037146
0000000131	0+0129076000000000231	0+0217546000000000331	0-0046986000000000431	0+0033376
0000000133	0+0126776000000000233	0+0214796000000000333	0-0044706000000000433	0+0038076
0000000135	0+0155336000000000235	0+0217186000000000335	0-0051006000000000435	0+0032946
0000000137	0+0172496000000000237	0+0219436000000000337	0-0045186000000000437	0+0037156
0000000139	0+0185216000000000239	0+0219356000000000339	0-0049296000000000439	0+0037396
0000000141	0+0171336000000000241	0+0180016000000000341	0-0074076000000000441	0+0009836
0000000143	0+0171336000000000243	0+0180026000000000343	0-0074076000000000443	0+0009836
0000000145	0+0353696000000000245	0+0365526000000000345	0-0006046000000000445	0+0078476
0000000147	0+0538706000000000247	0+0555366000000000347	0+0062836000000000447	0+0148066

51. Test 208242115760

0000000208	2+211576000000000057	0+0027746000000058	0+0026076000000059	0+0000126
0000000060	0+0010526000000061	0+0010486000000062	0+0010526000000063	0+0010536
0000000064	0+0031216000000065	0+0031026000000066	0+0029506000000067	0+0029206
0000000068	0+0028646000000069	0+0028386000000070	0+0027906000000071	0+0027456
0000000072	0+0027526000000073	0+0027406000000074	0+0030596000000075	0+0030156
0000000076	0+0027916000000077	0+0029476000000078	0+0030556000000079	0+0031466
0000000080	0+0029336000000081	0+0031196000000082	0+0028666000000083	0+0030196
0000000084	0+0028876000000085	0+0028856000000086	0+0030266000000087	0+0030136
0000000088	0+0029706000000089	0+0028006000000090	0+0028176000000091	0+0029746
0000000092	0+0027216000000093	0+0029366000000094	0+0027986000000095	0+0362006
0000000096	0+0028936000000097	0+0027766000000098	0+0028986000000099	0F0012493
0000000101	0+0171336000000201	0+0180036000600301	0-0074086000000401	0+0034356
0000000103	0+0163696000000203	0+0172126000000303	0-0074066000000403	0+0039516
0000000105	0+0171086000000205	0+0179756000000305	0-00621560000000[illegible]	0+0032756
0000000107	0+0159396000000207	0+0167766000000307	0-0058706000000407	0+0039056
0000000109	0+0152666000000209	0+0200076000000309	0-0057646000000409	0+0035836
0000000111	0+0156146000000211	0+0202196000000311	0-0044636000000411	0+0033016
0000000113	0+0155876000000213	0+0164306000000313	0-0044676000000413	0+0039046
0000000115	0+0165986000000215	0+0164316000000315	0-0044166000000415	0+0032746
0000000117	0+0178006000000217	0+0163726000000317	0-0044136000000417	0+0038166
0000000119	0+0172856000000219	0+0163746000000319	0-0042946000000419	0+0036096
0000000121	0+0189636000000221	0+0201606000000321	0-0043186000000421	0+0033086
0000000123	0+0192656000000223	0+0200056000000323	0-0043676000000423	0+0039096
0000000125	0+0195636000000225	0+0223986000000325	0-0043356000000425	0+0033926
0000000127	0+0197246000000227	0+0223116000000327	0-0043446000000427	0+0037776
0000000129	0+0196676000000229	0+0224636000000329	0-0043486000000429	0+0037466
0000000131	0+0136466000000231	0+0222206000000331	0-0046876000000431	0+0034596
0000000133	0+0141196000000233	0+0219546000000333	0-0044236000000433	0+0038656
0000000135	0+0164646000000235	0+0221876000000335	0-0049696000000435	0+0034346
0000000137	0+0179156000000237	0+0224016000000337	0-0044856000000437	0+0037736
0000000139	0+0190946000000239	0+0223386000000339	0-0048226000000439	0+0037966
0000000141	0+0171346000000241	0+0180026000000341	0-0074086000000441	0+0009836
0000000143	0+0171336000000243	0+0180025000000343	0-0074085000000443	0+0009836
0000000145	0+0353726000000245	0+0366574600000345	0-0006046000000445	0+0078506
0000000147	0+0538686000000247	0+0555495000000347	0+0002846000000447	0+0148046

52. Test 208300113490

0000000208	300113490000000057	0+00453460000000058	0+00219460000000059	0+0000106
0000000060	0+00097660000000061	0+00097560000000062	0+00097860000000063	0+0009796
0000000064	0+00608760000000065	0+00592660000000066	0+00543160000000067	0+0052596
0000000068	0+00500960000000069	0+00491460000000070	0+00461960000000071	0+0045626
0000000072	0+00449760000000073	0+00445160000000074	0+00492860000000075	0+0052846
0000000076	0+00456960000000077	0+00491760000000078	0+00569060000000079	0+0059576
0000000080	0+00509460000000081	0+00579150000000082	0+00470260000000083	0+0055876
0000000084	0+00451160000000085	0+00497060000000086	0+00542360000000087	0+0046926
0000000088	0+00538860000000089	0+00447850000000090	0+00473560000000091	0+0052776
0000000092	0+00449460000000093	0+00530260000000094	0+00453360000000095	0+0668716
0000000096	0+00470060000000097	0+00450760000000098	0+00501660000000099	0F0018643
0000000101	0+01723060000000201	0+01805760000000301	0-00737460000000401	0+0043336
0000000103	0+01593760000000203	0+01675260000000303	0-00737560000000403	0+0056326
0000000105	0+01718860000000205	0+01801360000000305	0-00807960000000405	0+0024096
0000000107	0+01528860000000207	0+01606160000000307	0-00862360000000407	0+0056116
0000000109	0+01368660000000209	0+00964050000000309	0-00648960000000409	0+0030956
0000000111	0+01467560000000211	0+00970560000000311	0-00017960000000411	0+0038666
0000000113	0+01476560000000213	0+01540160000000313	0-00074660000000413	0+0053626
0000000115	0+01564060000000215	0+01538760000000315	0-00098860000000415	0+0020996
0000000117	0+01705360000000217	0+01533660000000317	0-00109160000000417	0+0053796
0000000119	0+01725660000000219	0+01535860000000319	0-00083760000000419	0+0030936
0000000121	0+01972760000000221	0+02254960000000321	0-00143660000000421	0+0035486
0000000123	0+02068860000000223	0+02152060000000323	0-00071860000000423	0+0052926
0000000125	0+02152760000000225	0+01906060000000325	0-00092460000000425	0+0019626
0000000127	0+02249060000000227	0+01905860000000327	0-00063660000000427	0+0054626
0000000129	0+02219260000000229	0+01948060000000329	0-00104460000000429	0+0031936
0000000131	0+01144360000000231	0+01857460000000331	0-00319360000000431	0+0041336
0000000133	0+01069760000000233	0+01756460000000333	0-00312960000000433	0+0057806
0000000135	0+00722260000000235	0+01856660000000335	0-00497360000000435	0+0021006
0000000137	0+00802460000000237	0+01924360000000337	0-00262560000000437	0+0056806
0000000139	0+00898160000000239	0+01887460000000339	0-00524460000000439	0+0037076
0000000141	0+01723060000000241	0+01855660000000341	0-00737760000000441	0+0009176
0000000143	0+01724060000000243	0+01805660000000343	0-00737660000000443	0+0009186
0000000145	0+03543960000000245	0+03656160000000345	0-00058660000000445	0+0077706
0000000147	0+05385060000000247	0+05540660000000347	0+00627360000000447	0+0146946

53. Test 208300113490

0000000208	3001134900000000057	0+00463260000000058	0+00219160000000059	0+0000106
0000000060	0+00097560000000061	0+00097560000000062	0+00097860000000053	0+0009796
0000000064	0+00609560000000065	0+00593460000000066	0+00543960000000067	0+0052646
0000000068	0+00500560000000069	0+00491460000000070	0+00462260000000071	0+0045726
0000000072	0+00450960000000073	0+00445560000000074	0+00494460000000075	0+0052916
0000000076	0+00457160000000077	0+00491160000000078	0+00569960000000079	0+0059526
0000000080	0+00508660000000081	0+00577260000000082	0+00470760000000083	0+0055896
0000000084	0+00452060000000085	0+00497560000000086	0+00543160000000087	0+0046966
0000000088	0+00537960000000089	0+00448660000000090	0+00473260000000091	0+0052606
0000000092	0+00449860000000093	0+00531160000000094	0+00452860000000095	0+0322206
0000000096	0+00470060000000097	0+00450660000000098	0+00502860000000099	0F0018653
0000000101	0+01722560000000201	0+01804860000000301	0-00737860000000401	0+0043336
0000000103	0+01591360000000203	0+01671560000000303	0-00737860000000403	0+0055956
0000000105	0+01718760000000205	0+01800560000000305	0-00808360000000405	0+0024306
0000000107	0+01528060000000207	0+01605660000000307	0-00362760000000407	0+0056106
0000000109	0+01367960000000209	0+00963660000000309	0-00649460000000409	0+0030756
0000000111	0+01466560000000211	0+00970460000000311	0-00017960000000411	0+0038746
0000000113	0+01475560000000213	0+01538660000000313	0-00075060000000413	0+0053136
0000000115	0+01563560000000215	0+01537960000000315	0-00099360000000415	0+0020916
0000000117	0+01702360000000217	0+01533160000000317	0-00108760000000417	0+0053936
0000000119	0+01725460000000219	0+01535460000000319	0-00034160000000419	0+0031106
0000000121	0+01974260000000221	0+02254360000000321	0-00144260000000421	0+0035416
0000000123	0+02066660000000223	0+02159360000000323	0-00072360000000423	0+0052736
0000000125	0+02153860000000225	0+01905760000000325	0-00091560000000425	0+0019766
0000000127	0+02249060000000227	0+01905060000000327	0-00064360000000427	0+0054556
0000000129	0+02217060000000229	0+01948160000000329	0-00104460000000429	0+0032026
0000000131	0+01143860000000231	0+01857960000000331	0-00318860000000431	0+0041116
0000000133	0+01068360000000233	0+01755260000000333	0-00314060000000433	0+0057906
0000000135	0+00720660000000235	0+01856360000000335	0-00501560000000435	0+0021106
0000000137	0+00601560000000237	0+01922050000000337	0-00262260000000437	0+0056836
0000000139	0+00899250000000239	0+01885260000000339	0-00525160000000439	0+0037146
0000000141	0+01722560000000241	0+01804960000000341	0-00737860000000441	0+0009136
0000000143	0+01722760000000243	0+01304950000000343	0-00737860000000443	0+0009146
0000000145	0+03543960000000245	0+03665060000000345	0-00058660000000445	0+0077656
0000000147	0+05386860000000247	0+05541850000000347	0+00627460000000447	0+0146916

54. Test 208300215890

0000000205	300215890000000057	0+00479160000000058	0+002195600000000059	0+0000106
0000000050	0+000984600000000061	0+00038360000000062	0+000985600000000063	0+0009876
0000000054	0+006120600000000065	0+00594150000000066	0+005461600000000067	0+0052936
0000000055	0+005019600000000069	0+00493260000000070	0+004534600000000071	0+0045576
0000000072	0+004497600000000073	0+00445760000000074	0+005317600000000075	0+0050136
0000000076	0+004625600000000077	0+00497360000000078	0+005154600000000079	0+0055426
0000000080	0+004850600000000081	0+00546160000000082	0+004812600000000083	0+0051026
0000000084	0+004910600000000085	0+00476750000000086	0+005286600000000087	0+0051706
0000000088	0+005071600000000089	0+00474350000000090	0+004735600000000091	0+0051696
0000000092	0+004527600000000093	0+00509750000000094	0+004694600000000095	0+0349026
0000000096	0+005091600000000097	0+00451960000000098	0+005103600000000099	0F0018643
0000000101	0+017233600000000201	0+01805560000000301	0-007380600000000401	0+0056606
0000000103	0+015993600000000203	0+01675860000000303	0-007380600000000403	0+0066556
0000000105	0+017193600000000205	0+01801460000000305	0-004720600000000405	0+0053836
0000000107	0+015340600000000207	0+01511960000000307	0-004018600000000407	0+0062406
0000000109	0+013790600000000209	0+02233860000000309	0-003851600000000409	0+0058396
0000000111	0+014780600000000211	0+02286860000000311	0-000250600000000411	0+0053196
0000000113	0+014899600000000213	0+01546450000000313	0-000687600000000413	0+0066866
0000000115	0+015730600000000215	0+01546650000000315	0-001161600000000415	0+0053656
0000000117	0+017082600000000217	0+01542550000000317	0-001141600000000417	0+0060636
0000000119	0+017259600000000219	0+01543060000000319	0-000966600000000419	0+0060946
0000000121	0+019592600000000221	0+02245160000000321	0-001433600000000421	0+0052706
0000000123	0+020705600000000223	0+02145560000000323	0-000885600000000423	0+0068486
0000000125	0+021562600000000225	0+02742360000000325	0-001140600000000425	0+0056636
0000000127	0+022393600000000227	0+02737160000000327	0-000774600000000427	0+0060536
0000000129	0+022189600000000229	0+02768250000000329	0-001090600000000429	0+0065386
0000000131	0+011627600000000231	0+02729150000000331	0-002209600000000431	0+0054626
0000000133	0+012309600000000233	0+02644760000000333	0-001691600000000433	0+0070126
0000000135	0+018392600000000235	0+02689860000000335	0-002725600000000435	0+0059326
0000000137	0+019787600000000237	0+02743860000000337	0-001954600000000437	0+0062236
0000000139	0+021063600000000239	0+02733660000000339	0-002606600000000439	0+0066536
0000000141	0+017232600000000241	0+01805460000000341	0-007381600000000441	0+0009186
0000000143	0+017232600000000243	0+01805460000000343	0-007381600000000443	0+0009186
0000000145	0+035452600000000245	0+03657260000000345	0-000584600000000445	0+0077756
0000000147	0+053870600000000247	0+05541760000000347	0+005271600000000447	0+0146946

55. Test 208300315990

0000000203	3003159900000000057	0+00481260000000058	0+00220260000000059	0+0000106
0000000060	0+00100160000000061	0+00099760000000062	0+00100160000000063	0+0010036
0000000064	0+00611460000000065	0+00595660000000066	0+00548260000000067	0+0053076
0000000068	0+00503460000000069	0+00494660000000070	0+00464160000000071	0+0045886
0000000072	0+00452960000000073	0+00446960000000074	0+00533760000000075	0+0050396
0000000076	0+00464260000000077	0+00498960000000078	0+00516760000000079	0+0055566
0000000080	0+00486560000000081	0+00547360000000082	0+00482860000000083	0+0051096
0000000084	0+00492260000000085	0+00478360000000086	0+00529960000000087	0+0051886
0000000088	0+00508860000000089	0+00475260000000090	0+00475460000000091	0+0052026
0000000092	0+00454760000000093	0+00510260000000094	0+00471060000000095	0+0241436
0000000096	0+00512060000000097	0+00453560000000098	0+00512460000000099	0F0018643
0000000101	0+01722760000000201	0+01805560000000301	0-00737960000000401	0+0056626
0000000103	0+01597560000000203	0+01675860000000303	0-00737960000000403	0+0066276
0000000105	0+01718860000000205	0+01801760000000305	0-00472460000000405	0+0053586
0000000107	0+01534660000000207	0+01610960000000307	0-00402460000000407	0+0062696
0000000109	0+01378960000000209	0+02234560000000309	0-00383660000000409	0+0058136
0000000111	0+01477560000000211	0+02287360000000311	0-00028460000000411	0+0053246
0000000113	0+01489360000000213	0+01547360000000313	0-00068760000000413	0+0067136
0000000115	0+01574360000000215	0+01546660000000315	0-00117860000000415	0+0053346
0000000117	0+01709160000000217	0+01542060000000317	0-00117260000000417	0+0060956
0000000119	0+01725560000000219	0+01544250000000319	0-00099160000000419	0+0060796
0000000121	0+01961560000000221	0+02244360000000321	0-00143760000000421	0+0052676
0000000123	0+02068860000000223	0+02146550000000323	0-00090160000000423	0+0068256
0000000125	0+02154460000000225	0+02742060000000325	0-00116160000000425	0+0056246
0000000127	0+02240560000000227	0+02735950000000327	0-00079260000000427	0+0060276
0000000129	0+02216860000000229	0+02766850000000329	0-00109060000000429	0+0065096
0000000131	0+01163260000000231	0+02726760000000331	0-00223060000000431	0+0054756
0000000133	0+01232560000000233	0+02644160000000333	0-00169560000000433	0+0069946
0000000135	0+01840560000000235	0+02688360000000335	0-00273460000000435	0+0059236
0000000137	0+01977660000000237	0+02742060000000337	0-00198860000000437	0+0062086
0000000139	0+02103760000000239	0+02731950000000339	0-00260460000000439	0+0068496
0000000141	0+01723060000000241	0+01805360000000341	0-00737960000000441	0+0009186
0000000143	0+01723060000000243	0+01805360000000343	0-00738160000000443	0+0009186
0000000145	0+03545260000000245	0+03566650000000345	0-00058760000000445	0+0077736
0000000147	0+05387360000000247	0+05541660000000347	0+00527360000000447	0+0147026

56. Test 208300315990

0000000206	3003159900000000057	0+0048166000000058	0+0022056000000059	0+0000106
0000000060	0+0010006000000061	0+0009986000000062	0+0010026000000063	0+0010046
0000000064	0+0061236000000065	0+0059446000000066	0+0054866000000067	0+0053136
0000000068	0+0050436000000069	0+0049416000000070	0+0045466000000071	0+0045876
0000000072	0+0045216000000073	0+0044686000000074	0+0053356000000075	0+0050376
0000000076	0+0046466000000077	0+0049866000000078	0+0051836000000079	0+0055676
0000000080	0+0048556000000081	0+0054826000000082	0+0048396000000083	0+0051076
0000000084	0+0049396000000085	0+0047796000000086	0+0053096000000087	0+0051956
0000000088	0+0050846000000089	0+0047586000000090	0+0047556000000091	0+0051906
0000000092	0+0045516000000093	0+0051016000000094	0+0047116000000095	0+0197736
0000000095	0+0051076000000097	0+0045366000000098	0+0051236000000099	0F0018643
0000000101	0+0172266000000201	0+0180486000000301	0-0073826000000401	0+0056206
0000000103	0+0159676000000203	0+0157446000000303	0-0073826000000403	0+0066226
0000000195	0+0171876000000205	0+0180086000000305	0-0047306000000405	0+0053676
0000000107	0+0153406000000207	0+0161106000000307	0-0040306000000407	0+0062626
0000000109	0+0137856000000209	0+0223266000000309	0-0038396000000409	0+0057946
0000000111	0+0147736000000211	0+0228556000000311	0-0002846000000411	0+0053206
0000000113	0+0148946000000213	0+0154716000000313	0-0006956000000413	0+0066836
0000000115	0+0157476000000215	0+0154686000000315	0-0011746000000415	0+0053606
0000000117	0+0171276000000217	0+0154206000000317	0-0011706000000417	0+0060596
0000000119	0+0172496000000219	0+0154376000000319	0-0009966000000419	0+0060916
0000000121	0+0196336000000221	0+0224376000000321	0-0014326000000421	0+0052926
0000000123	0+0207116000000223	0+0214736000000323	0-0009016000000423	0+0068356
0000000125	0+0215876000000225	0+0274206000000325	0-0011536000000425	0+0056296
0000000127	0+0224156000000227	0+0273526000000327	0-0007946000000427	0+0060646
0000000129	0+0221796000000229	0+0275586000000329	0-0010826000000429	0+0065196
0000000131	0+011[illegible]816000000231	0+0272696000000331	0-0022406000000431	0+0054706
0000000133	0+0123116000000233	0+0264396000000333	0-0017176000000433	0+0070066
0000000135	0+0184076000000235	0+0269886000000335	0-0027336000000435	0+0059206
0000000137	0+0197846000000237	0+0274206000000337	0-0019776000000437	0+0061746
0000000139	0+0210466000000239	0+0273246000000339	0-0025926000000439	0+0068556
0000000141	0+0172286000000241	0+0180516000000341	0-0073816000000441	0+0009166
0000000143	0+0172306000000243	0+0180506000000343	0-0073816000000443	0+0009156
0000000145	0+0354376000000245	0+0366496000000345	0-0005896000000445	0+0077686
0000000147	0+0538686000000247	0+0554226000000347	0+0062706000000447	0+0146966

57. Test 208300415890

0000000208	3004158300000000057	0+00479960000000058	0+00218960000000059	0+0000106
0000000060	0+00097960000000061	0+00037760000000062	0+00098160000000063	0+0009816
0000000064	0+00609760000000065	0+00594760000000066	0+00546160000000067	0+0052936
0000000068	0+00500360000000069	0+00491760000000070	0+00462260000000071	0+0045596
0000000072	0+00449560000000073	0+00445260000000074	0+00533660000000075	0+0050536
0000000076	0+00461560000000077	0+00495560000000078	0+00517660000000079	0+0055886
0000000080	0+00488660000000081	0+00549960000000082	0+00480860000000083	0+0051066
0000000084	0+00491560000000085	0+00480360000000086	0+00531360000000087	0+0051816
0000000088	0+00507260000000089	0+00472960000000090	0+00477460000000091	0+0052026
0000000092	0+00452760000000093	0+00509160000000094	0+00468760000000095	0+0337526
0000000096	0+00508460000000097	0+00461560000000098	0+00510460000000099	0F0018633
0000000101	0+01723260000000201	0+01805860000000301	0-00738360000000401	0+0055116
0000000103	0+01594960000000203	0+01676560000000303	0-00738360000000403	0+0066226
0000000105	0+01718560000000205	0+01801360000000305	0-00489960000000405	0+0051916
0000000107	0+01530960000000207	0+01608160000000307	0-00422060000000407	0+0061836
0000000109	0+01374360000000209	0+02126760000000309	0-00406860000000409	0+0056496
0000000111	0+01472260000000211	0+02176760000000311	0-00022960000000411	0+0051446
0000000113	0+01482960000000213	0+01543060000000313	0-00070960000000413	0+0067026
0000000115	0+01569560000000215	0+01542060000000315	0-00107060000000415	0+0051496
0000000117	0+01707460000000217	0+01538360000000317	0-00111460000000417	0+0059466
0000000119	0+01725660000000219	0+01540050000000319	0-00090460000000419	0+0059666
0000000121	0+01969360000000221	0+02251660000000321	0-00143960000000421	0+0050976
0000000123	0+02072360000000223	0+02158160000000323	0-00077860000000423	0+0069026
0000000125	0+02156060000000225	0+02682160000000325	0-00103460000000425	0+0054206
0000000127	0+02244360000000227	0+02679660000000327	0-00059860000000427	0+0059846
0000000129	0+02219660000000229	0+02714060000000329	0-00106660000000429	0+0063916
0000000131	0+01154360000000231	0+02675860000000331	0-00228960000000431	0+0052806
0000000133	0+01155460000000233	0+02582760000000333	0-00166060000000433	0+0070946
0000000135	0+01755460000000235	0+02630560000000335	0-00287960000000435	0+0057286
0000000137	0+01879760000000237	0+02691360000000337	0-00208660000000437	0+0060986
0000000139	0+02000860000000239	0+02679860000000339	0-00273460000000439	0+0067376
0000000141	0+01723260000000241	0+01805560000000341	0-00738460000000441	0+0009206
0000000143	0+01723360000000243	0+01805560000000343	0-00738360000000443	0+0009216
0000000145	0+03545960000000245	0+03657260000000345	0-00058760000000445	0+0077776
0000000147	0+05387560000000247	0+05543460000000347	0+00627260000000447	0+0147056

58. Test 208300415890

0000000208	300+158900000000057	0+0048186000000058	0+0021916000000059	0+0000106
0000000060	0+000985600000000061	0+0009836000000062	0+0009856000000063	0+0009886
0000000064	0+006125600000000065	0+0059456000000066	0+0054516000000067	0+0052856
0000000068	0+005024600000000069	0+0049356000000070	0+0046376000000071	0+0045696
0000000072	0+004508600000000073	0+0044606000000074	0+0053446000000075	0+0050686
0000000076	0+004625600000000077	0+0049676000000078	0+0051756000000079	0+0055876
0000000080	0+004885600000000081	0+0054916000000082	0+0048116000000083	0+0051106
0000000084	0+004906600000000085	0+0048006000000086	0+0052996000000087	0+0051836
0000000088	0+005083600000000089	0+0047346000000090	0+0047756000000091	0+0051886
0000000092	0+004538600000000093	0+0050886000000094	0+0046846000000095	0+0352356
0000000096	0+005060600000000097	0+0046206000000098	0+0050996000000099	0F0018633
0000000101	0+017227600000000201	0+0180516000000301	0-0073856000000401	0+0055026
0000000103	0+015968600000000203	0+0167396000000303	0-0073846000000403	0+0066006
0000000105	0+017186600000000205	0+0180116000000305	0-0048986000000405	0+0051866
0000000107	0+015311600000000207	0+0160816000000307	0-0042206000000407	0+0061526
0000000109	0+013740600000000209	0+0212746000000309	0-0040696000000409	0+0056566
0000000111	0+014724600000000211	0+0217686000000311	0-0002276000000411	0+0051356
0000000113	0+014832600000000213	0+0154296000000313	0-0007146000000413	0+0067006
0000000115	0+015697600000000215	0+0154246000000315	0-0010726000000415	0+0051576
0000000117	0+017084600000000217	0+0153776000000317	0-0011296000000417	0+0059526
0000000119	0+017253600000000219	0+0153966000000319	0-0009046000000419	0+0059686
0000000121	0+019690600000000221	0+0224925000000321	0-0014366000000421	0+0050896
0000000123	0+020698600000000223	0+0215756000000323	0-0007856000000423	0+0068496
0000000125	0+021544600000000225	0+0268246000000325	0-0010476000000425	0+0054166
0000000127	0+022452600000000227	0+0267306000000327	0-0006996000000427	0+0059376
0000000129	0+022184600000000229	0+0271506000000329	0-0010636000000429	0+0063826
0000000131	0+011548600000000231	0+0267586000000331	0-0022806000000431	0+0052916
0000000133	0+011557600000000233	0+0258146000000333	0-0017056000000433	0+0070856
0000000135	0+017550600000000235	0+0263105000000335	0-0028736000000435	0+0057306
0000000137	0+018785600000000237	0+0259185000000337	0-0020316000000437	0+0061126
0000000139	0+020003600000000239	0+0268196000000339	0-0027486000000439	0+0067666
0000000141	0+017229600000000241	0+0180526000000341	0-0073846000000441	0+0009186
0000000143	0+017230600000000243	0+0180536000000343	0-0073846000000443	0+0009186
0000000145	0+035450600000000245	0+0365705000000345	0-0005886000000445	0+0077746
0000000147	0+053877600000000247	0+0554196000000347	0+0062736000000447	0+0147016

59. Test 208300515690

0000000208	3005156900000000057	0+0048406000000058	0+0021836000000059	0+0000096
0000000060	0+0009976000000061	0+0003946000000062	0+0009966000000063	0+0009936
0000000064	0+0061156000000065	0+0059646000000066	0+0054546000000067	0+0052936
0000000068	0+0050376000000069	0+0049376000000070	0+0046226000000071	0+0045976
0000000072	0+0045316000000073	0+0044786000000074	0+0053396000000075	0+0051416
0000000076	0+0046126000000077	0+0049586000000078	0+0052046000000079	0+0056876
0000000080	0+0049606000000081	0+0055696000000082	0+0047956000000083	0+0051376
0000000084	0+0049066000000085	0+0048646000000086	0+0053426000000087	0+0051796
0000000088	0+0050956000000089	0+0047146000000090	0+0048306000000091	0+0052156
0000000092	0+0045326000000093	0+0050916000000094	0+0046886000000095	0+0327886
0000000096	0+0050846000000097	0+0045356000000098	0+0050926000000099	0F0018633
0000000101	0+0172306000000201	0+0180556000000301	0-0073816000000401	0+0052126
0000000103	0+0159376000000203	0+0167236000000303	0-0073816000000403	0+0064986
0000000105	0+0171926000000205	0+0180186000000305	0-0052316000000405	0+0048356
0000000107	0+0152956000000207	0+0160696000000307	0-0045716000000407	0+0059676
0000000109	0+0137116000000209	0+0193856000000309	0-0044696000000409	0+0053956
0000000111	0+0146776000000211	0+0197816000000311	0-0001996000000411	0+0047986
0000000113	0+0147706000000213	0+0153946000000313	0-0007466000000413	0+0066266
0000000115	0+0156766000000215	0+0153896000000315	0-0009776000000415	0+0047376
0000000117	0+0170806000000217	0+0153406000000317	0-0011176000000417	0+0057276
0000000119	0+0172566000000219	0+0153636000000319	0-0008616000000419	0+0056436
0000000121	0+0197606000000221	0+0225116000000321	0-0014366000000421	0+0047396
0000000123	0+0206806000000223	0+0216166000000323	0-0007306000000423	0+0068856
0000000125	0+0215356000000225	0+0256906000000325	0-0009526000000425	0+0049846
0000000127	0+0224796000000227	0+0256006000000327	0-0006626000000427	0+0056936
0000000129	0+0221846000000229	0+0261206000000329	0-0010526000000429	0+0061226
0000000131	0+0114796000000231	0+0257056000000331	0-0024406000000431	0+0049396
0000000133	0+0103666000000233	0+0246516000000333	0-0017636000000433	0+0072036
0000000135	0+0161086000000235	0+0251676000000335	0-0031666000000435	0+0052946
0000000137	0+0171856000000237	0+0258746000000337	0-0021726000000437	0+0058936
0000000139	0+0182386000000239	0+0257946000000339	0-0030246000000439	0+0065506
0000000141	0+0172296000000241	0+0180556000000341	0-0073816000000441	0+0009226
0000000143	0+0172326000000243	0+0180546000000343	0-0073826000000443	0+0009226
0000000145	0+0354476000000245	0+0365616000000345	0-0005886000000445	0+0077776
0000000147	0+0538736000000247	0+0554256000000347	0+0062766000000447	0+0147066

60. Test 208300515690

0000000208	3005156900000000057	0+0048546000000000058	0+0021846000000000059	0+0000106
0000000060	0+00100+6000000000061	0+0010016000000000062	0+0010056000000000063	0+0010056
0000000054	0+0061046000000000065	0+0059536000000000066	0+0054726000000000067	0+0053026
0000000068	0+0050426000000000069	0+0049326000000000070	0+0046346000000000071	0+0046046
0000000072	0+0045396000000000073	0+0044786000000000074	0+0053486000000000075	0+0051426
0000000076	0+0046246000000000077	0+0049626000000000078	0+0052126000000000079	0+0056966
0000000080	0+0049716000000000081	0+0055756000000000082	0+0047966000000000083	0+0051496
0000000084	0+0049116000000000085	0+0048726000000000086	0+0053466000000000087	0+0051796
0000000088	0+0050966000000000089	0+0047266000000000090	0+0048406000000000091	0+0052176
0000000092	0+0045386000000000093	0+0050986000000000094	0+0047006000000000095	0+0266456
0000000096	0+0050926000000000097	0+0045376000000000098	0+0051076000000000099	0F0018643
0000000101	0+0172266000000000201	0+0180506000000000301	0-0073836000000000401	0+0052066
0000000103	0+0159206000000000203	0+0167346000000000303	0-0073836000000000403	0+0065146
0000000105	0+0171866000000000205	0+0180126000000000305	0-0052346000000000405	0+0048436
0000000107	0+0152806000000000207	0+0160476000000000307	0-0045726000000000407	0+0059606
0000000109	0+0137096000000000209	0+0193546000000000309	0-0044716000000000409	0+0053526
0000000111	0+0146816000000000211	0+0197606000000000311	0-0001886000000000411	0+0048066
0000000113	0+0147806000000000213	0+0154086000000000313	0-0007466000000000413	0+0066076
0000000115	0+0156856000000000215	0+0153916000000000315	0-0009866000000000415	0+0047496
0000000117	0+0170716000000000217	0+0153456000000000317	0-0011206000000000417	0+0057216
0000000119	0+0172586000000000219	0+0153726000000000319	0-0008646000000000419	0+0056516
0000000121	0+0197746000000000221	0+0225026000000000321	0-0014346000000000421	0+0047426
0000000123	0+0206616000000000223	0+0216226000000000323	0-0007246000000000423	0+0068876
0000000125	0+0215356000000000225	0+0256896000000000325	0-0009516000000000425	0+0049856
0000000127	0+0224936000000000227	0+0255156000000000327	0-0006596000000000427	0+0057056
0000000129	0+0221796000000000229	0+0260986000000000329	0-0010606000000000429	0+0061026
0000000131	0+0114776000000000231	0+0256976000000000331	0-0024586000000000431	0+0049446
0000000133	0+0108626000000000233	0+0246546000000000333	0-0017626000000000433	0+0071596
0000000135	0+0161046000000000235	0+0251686000000000335	0-0031806000000000435	0+0053026
0000000137	0+0171856000000000237	0+0258776000000000337	0-0021726000000000437	0+0058926
0000000139	0+0182476000000000239	0+0257606000000000339	0-0030646000000000439	0+0065186
0000000141	0+0172276000000000241	0+0180516000000000341	0-0073836000000000441	0+0009206
0000000143	0+0172356000000000243	0+0180516000000000343	0-0073836000000000443	0+0009196
0000000145	0+0354505000000000245	0+0366636000000000345	0-0005886000000000445	0+0077746
0000000147	0+0538766000000000247	0+0554366000000000347	0+0062706000000000447	0+0147046

61. Test 208300615090

0000000208	3006150900000000057	0+004773600000000058	0+002179600000000059	0+0000106
0000000060	0+001012600000000061	0+001007600000000062	0+001012600000000063	0+0010126
0000000064	0+006114600000000065	0+005962600000000066	0+005458600000000067	0+0053146
0000000068	0+005031600000000069	0+004934600000000070	0+004635600000000071	0+0046086
0000000072	0+004536600000000073	0+004495600000000074	0+005205600000000075	0+0052626
0000000076	0+004559600000000077	0+004949600000000078	0+005330600000000079	0+0058206
0000000080	0+005049600000000081	0+005554600000000082	0+004761600000000083	0+0052496
0000000084	0+004821600000000085	0+004931600000000086	0+005336600000000087	0+0050606
0000000088	0+005181600000000089	0+004560500000000090	0+004827600000000091	0+0052046
0000000092	0+004476600000000093	0+005150600000000094	0+004654600000000095	0+0351656
0000000096	0+005031600000000097	0+004613600000000098	0+005090600000000099	0F0018633
0000000101	0+017231600000000201	0+018058600000000301	0-007382600000000401	0+0046246
0000000103	0+015955600000000203	0+016724600000000303	0-007381600000000403	0+0061326
0000000105	0+017193600000000205	0+019018600000000305	0-007245600000000405	0+0039826
0000000107	0+015280600000000207	0+016052600000000307	0-005123600000000407	0+0057206
0000000109	0+013708600000000209	0+015774600000000309	0-005103600000000409	0+0046676
0000000111	0+014567600000000211	0+016139600000000311	0-000201600000000411	0+0041756
0000000113	0+014760600000000213	0+015400600000000313	0-000762600000000413	0+0061006
0000000115	0+015677600000000215	0+015386600000000315	0-000967600000000415	0+0037956
0000000117	0+017045600000000217	0+015341600000000317	0-001096600000000417	0+0054486
0000000119	0+017254600000000219	0+015357600000000319	0-000863600000000419	0+0048906
0000000121	0+019816600000000221	0+022548600000000321	0-001436600000000421	0+0041996
0000000123	0+020649600000000223	0+021631600000000323	0-000720600000000423	0+0065476
0000000125	0+021540600000000225	0+023398600000000325	0-000916600000000425	0+0038996
0000000127	0+022490600000000227	0+023254600000000327	0-000658600000000427	0+0054486
0000000129	0+022159600000000229	0+023940600000000329	0-001044600000000429	0+0053526
0000000131	0+011425600000000231	0+023474600000000331	0-002721600000000431	0+0047526
0000000133	0+010648600000000233	0+022122600000000333	0-002027600000000433	0+0070056
0000000135	0+013321600000000235	0+022815600000000335	0-003868600000000435	0+0042046
0000000137	0+014445600000000237	0+023720600000000337	0-002356600000000437	0+0057386
0000000139	0+014904600000000239	0+023657600000000339	0-003722600000000439	0+0058486
0000000141	0+017239600000000241	0+018056600000000341	0-007382600000000441	0+0009246
0000000143	0+017233600000000243	0+018055600000000343	0-007383600000000443	0+0009246
0000000145	0+035444600000000245	0+036665600000000345	0-000589600000000445	0+0077806
0000000147	0+053863600000000247	0+055407600000000347	0+006274600000000447	0+0147066

62. Test 208300514090

0000000208	300515090000000057	0+00476460000000058	0+00218460000000059	0+0000116
0000000060	0+00099360000000061	0+00099560000000062	0+00100060000000063	0+0010036
0000000064	0+00611360000000065	0+00595760000000066	0+00545160000000067	0+0052936
0000000068	0+00502560000000069	0+00492560000000070	0+00462960000000071	0+0045906
0000000072	0+00453560000000073	0+00448060000000074	0+00519660000000075	0+0052506
0000000076	0+00455260000000077	0+00493260000000078	0+00530960000000079	0+0057926
0000000080	0+00504560000000081	0+00553760000000082	0+00473760000000083	0+0052286
0000000084	0+00479560000000085	0+00491660000000086	0+00530860000000087	0+0050456
0000000088	0+00515160000000089	0+00464860000000090	0+00481560000000091	0+0051876
0000000092	0+00445860000000093	0+00512960000000094	0+00462760000000095	0+0239206
0000000096	0+00501560000000097	0+00459460000000098	0+00506960000000099	0F0018623
0000000101	0+01722560000000201	0+01805160000000301	0-00738360000000401	0+0046536
0000000103	0+01593460000000203	0+01658860000000303	0-00738260000000403	0+0061546
0000000105	0+01719560000000205	0+01801360000000305	0-00725460000000405	0+0040006
0000000107	0+01528960000000207	0+01605960000000307	0-00511660000000407	0+0057756
0000000109	0+01371260000000209	0+01575760000000309	0-00510260000000409	0+0046406
0000000111	0+01467560000000211	0+01612060000000311	0-00018560000000411	0+0041786
0000000113	0+01476760000000213	0+01539560000000313	0-00075460000000413	0+0061006
0000000115	0+01567560000000215	0+01573260000000315	0-00095850000000415	0+0037736
0000000117	0+01706560000000217	0+01533060000000317	0-00109160000000417	0+0054346
0000000119	0+01724760000000219	0+01535560000000319	0-00083960000000419	0+0048516
0000000121	0+01980560000000221	0+02253560000000321	0-00143660000000421	0+0042226
0000000123	0+02066560000000223	0+02154660000000323	0-00069960000000423	0+0065356
0000000125	0+02155860000000225	0+02340660000000325	0-00091460000000425	0+0039376
0000000127	0+02250360000000227	0+02326760000000327	0-00065660000000427	0+0054386
0000000129	0+02216860000000229	0+02395560000000329	0-00103560000000429	0+0053686
0000000131	0+01142460000000231	0+02348160000000331	0-00269560000000431	0+0047886
0000000133	0+01064560000000233	0+02212250000000333	0-00198460000000433	0+0070076
0000000135	0+01332960000000235	0+02281660000000335	0-00386860000000435	0+0042026
0000000137	0+01445060000000237	0+02372860000000337	0-00238460000000437	0+0057586
0000000139	0+01489860000000239	0+02367360000000339	0-00372160000000439	0+0058626
0000000141	0+01722760000000241	0+01805260000000341	0-00738360000000441	0+0009226
0000000143	0+01722860000000243	0+01805260000000343	0-00738360000000443	0+0009226
0000000145	0+03544460000000245	0+03655460000000345	0-00059060000000445	0+0077776
0000000147	0+05387860000000247	0+05543560000000347	0+00627560000000447	0+0147106

63. Test 208300713490

0000000203	3007134900000000057	0+0046686000000000058	0+0021876000000000059	0+0000106
0000000060	0+0010026000000000061	0+0009986000000000062	0+0010036000000000063	0+0010066
0000000064	0+0061076000000000065	0+0059366000000000066	0+0054556000000000067	0+0052796
0000000068	0+0050316000000000069	0+0049236000000000070	0+0046306000000000071	0+0045876
0000000072	0+0045346000000000073	0+0044776000000000074	0+0049676000000000075	0+0053126
0000000076	0+0045896000000000077	0+0049376000000000078	0+0056906000000000079	0+0059926
0000000080	0+0051136000000000081	0+0058096000000000082	0+0047196000000000083	0+0055916
0000000084	0+0045516000000000085	0+0049926000000000086	0+0054406000000000087	0+0047156
0000000088	0+0053976000000000089	0+0045056000000000090	0+0047726000000000091	0+0052976
0000000092	0+0045056000000000093	0+0053216000000000094	0+0045556000000000095	0+0360206
0000000096	0+0047166000000000097	0+0046406000000000098	0+0050496000000000099	0F0018633
0000000101	0+0172316000000000201	0+0180546000000000301	0-0073816000000000401	0+0043636
0000000103	0+0159136000000000203	0+0167136000000000303	0-0073826000000000403	0+0056496
0000000105	0+0171886000000000205	0+0180106000000000305	0-0080856000000000405	0+0024736
0000000107	0+0152936000000000207	0+0160616000000000307	0-0086296000000000407	0+0056086
0000000109	0+0137186000000000209	0+0095796000000000309	0-0064396000000000409	0+0031216
0000000111	0+0146556000000000211	0+0097516000000000311	0-0001876000000000411	0+0038946
0000000113	0+0147656000000000213	0+0154036000000000313	0-0007796000000000413	0+0053436
0000000115	0+0156686000000000215	0+0153926000000000315	0-0009596000000000415	0+0021416
0000000117	0+0170726000000000217	0+0153426000000000317	0-0011166000000000417	0+0053546
0000000119	0+0172496000000000219	0+0153606000000000319	0-0008646000000000419	0+0031356
0000000121	0+0197746000000000221	0+0225436000000000321	0-0014546000000000421	0+0035696
0000000123	0+0206706000000000223	0+0216426000000000323	0-0007056000000000423	0+0053246
0000000125	0+0215136000000000225	0+0190926000000000325	0-0009466000000000425	0+0019966
0000000127	0+0224816000000000227	0+0190936000000000327	0-0006416000000000427	0+0054006
0000000129	0+0221726000000000229	0+0195706000000000329	0-0010626000000000429	0+0032676
0000000131	0+0114146000000000231	0+0186636000000000331	0-0032046000000000431	0+0041376
0000000133	0+0106166000000000233	0+0175826000000000333	0-0030416000000000433	0+0057966
0000000135	0+0071876000000000235	0+0185136000000000335	0-0049856000000000435	0+0021636
0000000137	0+0060336000000000237	0+0192936000000000337	0-0026116000000000437	0+0056516
0000000139	0+0090326000000000239	0+0189306000000000339	0-0052436000000000439	0+0037536
0000000141	0+0172276000000000241	0+0180536000000000341	0-0073826000000000441	0+0009256
0000000143	0+0172296000000000243	0+0180536000000000343	0-0073836000000000443	0+0009256
0000000145	0+0354456000000000245	0+0366626000000000345	0-0005896000000000445	0+0077786
0000000147	0+0538756000000000247	0+0554316000000000347	0+0062706000000000447	0+0147046

64. Test 208300713490

0000000208	0007134900000000057	0+0045616000000058	0+0021836000000000059	0+0000106
0000000060	0+0009986000000000061	0+0009946000000062	0+0010006000000000063	0+0010026
0000000064	0+0061086000000000065	0+0059656000000066	0+0054606000000000067	0+0052886
0000000068	0+0050316000000000069	0+0049326000000070	0+0046386000000000071	0+0045966
0000000072	0+0045306000000000073	0+0044755000000074	0+0049786000000000075	0+0053076
0000000076	0+0045866000000000077	0+0049396000000078	0+0057096000000000079	0+0059776
0000000080	0+0051206000000000081	0+0058146000000082	0+0047276000000000083	0+0056066
0000000084	0+0045466000000000085	0+0043966000000086	0+0054516000000000087	0+0047156
0000000088	0+0053906000000000089	0+0044976000000090	0+0047596000000000091	0+0052926
0000000092	0+0045036000000000093	0+0053156000000094	0+0045526000000000095	0+0256566
0000000096	0+0047226000000000097	0+0045336000000098	0+0050416000000000099	0F0018633
0000000101	0+0172256000000000201	0+0180506000000301	0-0073846000000000401	0+0043236
0000000103	0+0159306000000000203	0+0167176000000303	0-0073846000000000403	0+0056846
0000000105	0+0171846000000000205	0+0180076000000305	0-0080816000000000405	0+0024366
0000000107	0+0152816000000000207	0+0160606000000307	0-0086276000000000407	0+0056036
0000000109	0+0137156000000000209	0+0096556000000309	0-0064706000000000409	0+0030946
0000000111	0+0146586000000000211	0+0097196000000311	0-0001916000000000411	0+0038896
0000000113	0+0147546000000000213	0+0153336000000313	0-0007636000000000413	0+0053506
0000000115	0+0155576000000000215	0+0153896000000315	0-0009556000000000415	0+0021246
0000000117	0+0170436000000000217	0+0153306000000317	0-0011086000000000417	0+0053936
0000000119	0+0172516000000000219	0+0153656000000319	0-0008296000000000419	0+0031126
0000000121	0+0197436000000000221	0+0225676000000321	0-0014466000000000421	0+0035856
0000000123	0+0206576000000000223	0+0215666000000323	0-0006896000000000423	0+0052846
0000000125	0+0215316000000000225	0+0191016000000325	0-0009436000000000425	0+0019976
0000000127	0+0224896000000000227	0+0190816000000327	0-0006476000000000427	0+0054146
0000000129	0+0221806000000001229	0+0195566000000329	0-0010536000000000429	0+0032786
0000000131	0+0114156000000000231	0+0186676000000331	0-0031886000000000431	0+0041286
0000000133	0+0106186000000000233	0+0175736000000333	0-0030406000000000433	0+0058106
0000000135	0+0071836000000000235	0+0186156000000335	0-0049676000000000435	0+0021606
0000000137	0+0060316000000000237	0+0193036000000337	0-0025976000000000437	0+0056396
0000000139	0+0090256000000000239	0+0189446000000339	0-0052266000000000439	0+0037636
0000000141	0+0172266000000000241	0+0180516000000341	0-0073835000000000441	0+0009236
0000000143	0+0172306000000000243	0+0180516000000343	0-0073836000000000443	0+0009226
0000000145	0+0354456000000000245	0+0366666000000345	0-0005906000000000445	0+0077796
0000000147	0+0538636000000000247	0+0554446000000347	0+0062776000000000447	0+0147066

65. Test 208300813400

0000000208	300813400000000057	0+0054576000000058	0+0021576000000059	0+0000116
0000000060	0+0009746000000061	0+0009716000000062	0+0009746000000063	0+0009776
0000000064	0+0073536000000065	0+0071746000000066	0+0065556000000067	0+0063986
0000000068	0+0061546000000069	0+0059896000000070	0+0056606000000071	0+0055056
0000000072	0+0054246000000073	0+0052566000000074	0+0064356000000075	0+0063026
0000000076	0+0057625000000077	0+0061576000000078	0+0067956000000079	0+0070896
0000000080	0+0060576000000081	0+0069536000000082	0+0059466000000083	0+0067046
0000000084	0+0058546000000085	0+0058396000000086	0+0065696000000087	0+0061976
0000000088	0+0064516000000089	0+0056016000000090	0+0055656000000091	0+0064046
0000000092	0+0053896000000093	0+0063436000000094	0+0052676000000095	0+0392626
0000000096	0+0060836000000097	0+0054666000000096	0+0059406000000099	0F0020703
0000000101	0+0172336000000201	0+0180616000000301	0-0073836000000401	0+0037746
0000000103	0+0157306000000203	0+0165556000000303	0-0073836000000403	0+0061956
0000000105	0+0171866000000205	0+0180136000000305	0-0074936000000405	0+0040096
0000000107	0+0149946000000207	0+0157876000000307	0-0030976000000407	0+0063226
0000000109	0+0132936000000209	0+0061235000000309	0-0075906000000409	0+0037406
0000000111	0+0144176000000211	0+0061486000000311	0+0022066000000411	0+0031386
0000000113	0+0145106000000213	0+0149616000000313	0+0007406000000413	0+0060026
0000000115	0+0154776000000215	0+0150406000000315	0+0012546000000415	0+0029666
0000000117	0+0174716000000217	0+0148796000000317	0+0002186000000417	0+0060986
0000000119	0+0172796000000219	0+0150086000000319	0+0017386000000419	0+0035596
0000000121	0+0192166000000221	0+0244145000000321	0-0001336000000421	0+0029056
0000000123	0+0219496000000223	0+0225326000000323	0+0014646000000423	0+0060656
0000000125	0+0213116000000225	0+0199566000000325	0+0002486000000425	0+0025796
0000000127	0+0225036000000227	0+0182125000000327	0+0015646000000427	0+0061206
0000000129	0+0240086000000229	0+0198376000000329	0+0000816000000429	0+0035556
0000000131	0+0111236000000231	0+0189176000000331	0-0033896000000431	0+0035166
0000000133	0+0109916000000233	0+0187016000000333	0-0011125000000433	0+0067196
0000000135	0+0075286000000235	0+0183176000000335	0-0026036000000435	0+0030786
0000000137	0+0063036000000237	0+0194026000000337	0-0014326000000437	0+0066386
0000000139	0+0046016000000239	0+0191486000000339	0-0050486000000439	0+0043916
0000000141	0+0172336000000241	0+0180596000000341	0-0073856000000441	0+0009296
0000000143	0+0172326000000243	0+0130596000000343	0-0073866000000443	0+0009286
0000000145	0+0354586000000245	0+0365796000000345	0-0005866000000445	0+0077886
0000000147	0+0538806000000247	0+0554366000000347	0+0062746000000447	0+0147186

66. Test 208300813400

0000000208	3008134000000000057	0+00546160000000058	0+00215360000000059	0+0000116
0000000060	0+00098360000000061	0+00098060000000062	0+00098460000000063	0+0009866
0000000064	0+00736760000000065	0+00718060000000066	0+00655860000000067	0+0063926
0000000068	0+00616660000000069	0+00599060000000070	0+00564960000000071	0+0055146
0000000072	0+00543260000000073	0+00526860000000074	0+00642960000000075	0+0063016
0000000076	0+00570160000000077	0+00614860000000078	0+00680160000000079	0+0070726
0000000080	0+00606760000000081	0+00634760000000082	0+00595460000000083	0+0066896
0000000084	0+00584060000000085	0+00584860000000086	0+00658860000000087	0+0062026
0000000088	0+00646060000000089	0+00559860000000090	0+00558960000000091	0+0064066
0000000092	0+00541460000000093	0+00634560000000094	0+00528260000000095	0+0249616
0000000096	0+00508060000000097	0+00547560000000098	0+00594760000000099	0F0020693
0000000101	0+01722860000000201	0+01305560000000301	0-00738660000000401	0+0037256
0000000103	0+01572660000000203	0+01652260000000303	0-00738660000000403	0+0061566
0000000105	0+01718760000000205	0+01801160000000305	0-00749960000000405	0+0040446
0000000107	0+01502260000000207	0+01579760000000307	0-00810160000000407	0+0063226
0000000109	0+01331160000000209	0+00616650000000309	0-00759560000000409	0+0036576
0000000111	0+01442160000000211	0+00618350000000311	0+00221060000000411	0+0031666
0000000113	0+01451760000000213	0+00768560000000313	0+00071560000000413	0+0060126
0000000115	0+01549160000000215	0+01504650000000315	0+00126460000000415	0+0029336
0000000117	0+01750160000000217	0+01487260000000317	0+00021360000000417	0+0060876
0000000119	0+01727660000000219	0+01439660000000319	0+00173960000000419	0+0035926
0000000121	0+01921560000000221	0+02437960000000321	0-00015260000000421	0+0029156
0000000123	0+02193160000000223	0+02251860000000323	0+00146960000000423	0+0059786
0000000125	0+02128660000000225	0+01991660000000325	0+00022860000000425	0+0025746
0000000127	0+02249460000000227	0+01826760000000327	0+00155760000000427	0+0061416
0000000129	0+02403060000000229	0+01384360000000329	0+00007260000000429	0+0035426
0000000131	0+01112160000000231	0+01891050000000331	0-00333660000000431	0+0035056
0000000133	0+01009160000000233	0+01874460000000333	0-00109160000000433	0+0068136
0000000135	0+00752360000000235	0+01822060000000335	0-00254360000000435	0+0030876
0000000137	0+00630760000000237	0+01943060000000337	0-00149560000000437	0+0065526
0000000139	0+00458560000000239	0+01914760000000339	0-00506560000000439	0+0043676
0000000141	0+01722960000000241	0+01805550000000341	0-00738660000000441	0+0009256
0000000143	0+01723060000000243	0+01805560000000343	0-00738660000000443	0+0009256
0000000145	0+03546160000000245	0+03567460000000345	0-00059060000000445	0+0077836
0000000147	0+05388760000000247	0+05543160000000347	0+00627360000000447	0+0147126

67. Test 208300915800

0000000208	3009158000000000057	0+0057916000000058	0+0021596000000059	0+0000116
0000000060	0+0010076000000061	0+0010056000000062	0+0010066000000063	0+0010096
0000000064	0+0074116000000065	0+0072106000000066	0+0066066000000067	0+0064336
0000000068	0+0061646000000069	0+0068436000000070	0+0056376000000071	0+0055446
0000000072	0+0053956000000073	0+0052766000000074	0+0062756000000075	0+0060276
0000000076	0+0055196000000077	0+0059406000000078	0+0062686000000079	0+0066926
0000000080	0+0058366000000081	0+0065426000000082	0+0056996000000083	0+0061596
0000000084	0+0057936000000085	0+0057316000000086	0+0062776000000087	0+0061006
0000000088	0+00608[illegible]000000089	0+0056406000000090	0+0057056000000091	0+0061556
0000000092	0+0054456000000093	0+0060546000000094	0+0056146000000095	0+0395796
0000000096	0+0060566000000097	0+0055706000000098	0+0060386000000099	0F0020713
0000000101	0+0172346000000201	0+0180626000000301	0-0073856000000401	0+0064246
0000000103	0+0157836000000203	0+0165926000000303	0-0073866000000403	0+0079236
0000000105	0+0171936000000205	0+0180186000000305	0-0042276000000405	0+0060226
0000000107	0+0150666000000207	0+0158396000000307	0-0035546000000407	0+0074076
0000000109	0+0133666000000209	0+0213596000000309	0-0034056000000409	0+0065096
0000000111	0+0144656000000211	0+0213166000000311	0+0018056000000411	0+0059046
0000000113	0+0145716000000213	0+0150756000000313	0+0008366000000413	0+0079396
0000000115	0+0155406000000215	0+0151006000000315	0+0007106000000415	0+0058056
0000000117	0+0172006000000217	0+0150005000000317	0+0003196000000417	0+0071126
0000000119	0+0172656000000219	0+0150686000000319	0+0011566000000419	0+0068686
0000000121	0+0194816000000221	0+0239566000000321	0+0000016000000421	0+0057696
0000000123	0+0212456000000223	0+0221376000000323	0+0009686000000423	0+0081646
0000000125	0+0216976000000225	0+0285116000000325	0+0003476000000425	0+0060636
0000000127	0+0229036000000227	0+0282505000000327	0+0010236000000427	0+0069816
0000000129	0+0232876000000229	0+0288906000000329	0+0002276000000429	0+0074276
0000000131	0+0112476000000231	0+0284896000000331	0-0013146000000431	0+0059916
0000000133	0+0142316000000233	0+0273136000000333	0-0004586000000433	0+0084526
0000000135	0+0179756000000235	0+0278616000000335	0-0019806000000435	0+0064016
0000000137	0+0188106000000237	0+0265346000000337	0-0006836000000437	0+0071086
0000000139	0+0200566000000239	0+0285346000000339	0-0019096000000439	0+0079206
0000000141	0+0172376000000241	0+0180606000000341	0-0073876000000441	0+0009296
0000000143	0+0172346000000243	0+0180605000000343	0-0073886000000443	0+0009286
0000000145	0+0354596000000245	0+0366796000000345	0-0005836000000445	0+0077886
0000000147	0+0538946000000247	0+0554446000000347	0+0052796000000447	0+0147186

68. Test 208300915800

0000000208	30091580000000000057	0+0058136000000000058	0+0021676000000000059	0+0000116
0000000060	0+0010156000000000061	0+0010146000000000062	0+0010156000000000063	0+0010186
0000000064	0+0074096000000000065	0+0072336000000000066	0+0066006000000000067	0+0064316
0000000068	0+0061806000000000069	0+0060506000000000070	0+0056536000000000071	0+0055606
0000000072	0+0054016000000000073	0+0052936000000000074	0+0062876000000000075	0+0060436
0000000076	0+0055356000000000077	0+0059106000000000078	0+0062606000000000079	0+0066856
0000000080	0+0058406000000000081	0+0065566000000000082	0+0057236000000000083	0+0061616
0000000084	0+0058116000000000085	0+0057466000000000086	0+0062776000000000087	0+0061096
0000000088	0+0060816000000000089	0+0056376000000000090	0+0057276000000000091	0+0061546
0000000092	0+0054536000000000093	0+0060606000000000094	0+0056256000000000095	0+0353896
0000000096	0+0060626000000000097	0+0055816000000000098	0+0060436000000000099	0F0020703
0000000101	0+0172306000000000201	0+0180566000000000301	0-0073876000000000401	0+0064106
0000000103	0+0157866000000000203	0+0165606000000000303	0-0073876000000000403	0+0078686
0000000105	0+0171836000000000205	0+0180146000000000305	0-0042306000000000405	0+0060026
0000000107	0+0150616000000000207	0+0158336000000000307	0-0035586000000000407	0+0073766
0000000109	0+0133606000000000209	0+0213566000000000309	0-0034086000000000409	0+0065076
0000000111	0+0144706000000000211	0+0218236000000000311	0+0017876000000000411	0+0058696
0000000113	0+0145716000000000213	0+0150726000000000313	0+0008446000000000413	0+0079096
0000000115	0+0155376000000000215	0+0150866000000000315	0+0006856000000000415	0+0058066
0000000117	0+0171886000000000217	0+0149886000000000317	0+0003126000000000417	0+0070256
0000000119	0+0172626000000000219	0+0150695000000000319	0+0011336000000000419	0+0068776
0000000121	0+0194746000000000221	0+0239496000000000321	0-0000126000000000421	0+0057756
0000000123	0+0212956000000000223	0+0221406000000000323	0+0009736000000000423	0+0081356
0000000125	0+0217046000000000225	0+0285126000000000325	0+0003356000000000425	0+0060166
0000000127	0+0228906000000000227	0+0282426000000000327	0+0010226000000000427	0+0069256
0000000129	0+0232956000000000229	0+0288796000000000329	0+0002296000000000429	0+0073976
0000000131	0+0112416000000000231	0+0284676000000000331	0-0013366000000000431	0+0059626
0000000133	0+0142006000000000233	0+0272916000000000333	0-0005116000000000433	0+0084566
0000000135	0+0179676000000000235	0+0278446000000000335	0-0019906000000000435	0+0063956
0000000137	0+0188126000000000237	0+0286176000000000337	0-0006976000000000437	0+0071466
0000000139	0+0200506000000000239	0+0286136000000000339	0-0018806000000000439	0+0079306
0000000141	0+0172326000000000241	0+0180586000000000341	0-0073876000000000441	0+0009276
0000000143	0+0172336000000000243	0+0130576000000000343	0-0073886000000000443	0+0009266
0000000145	0+0354606000000000245	0+0365686000000000345	0-0005936000000000445	0+0077846
0000000147	0+0538956000000000247	0+0554506000000000347	0+0062796000000000447	0+0147206

69. Test 208301015700

0000000208	3010157000000000057	0+0058046000000000058	0+0021816000000000059	0+0000116
0000000060	0+0010056000000000061	0+0010036000000000062	0+0010066000000000063	0+0010096
0000000064	0+0073956000000000065	0+0072176000000000066	0+0065966000000000067	0+0064346
0000000068	0+0061806000000000069	0+0060376000000000070	0+0056616000000000071	0+0055446
0000000072	0+0054316000000000073	0+0052866000000000074	0+0062836000000000075	0+0060786
0000000076	0+0055056000000000077	0+0058926000000000078	0+0062996000000000079	0+0067626
0000000080	0+0058746000000000081	0+0065986000000000082	0+0056846000000000083	0+0061996
0000000084	0+0057866000000000085	0+0057726000000000086	0+0063126000000000087	0+0061036
0000000088	0+0061046000000000089	0+0056256000000000090	0+0057476000000000091	0+0061736
0000000092	0+0054416000000000093	0+0060586000000000094	0+0055936000000000095	0+0401056
0000000096	0+0060346000000000097	0+0055826000000000098	0+0060116000000000099	0F0020703
0000000101	0+0172346000000000201	0+0180616000000000301	0-0073866000000000401	0+0062296
0000000103	0+0157386000000000203	0+0165416000000000303	0-0073866000000000403	0+0078456
0000000105	0+0171886000000000205	0+0180156000000000305	0-0044446000000000405	0+0057826
0000000107	0+0150336000000000207	0+0158146000000000307	0-0037536000000000407	0+0074276
0000000109	0+0133276000000000209	0+0197786000000000309	0-0036656000000000409	0+0062796
0000000111	0+0144356000000000211	0+0202086000000000311	0+0020026000000000411	0+0056896
0000000113	0+0145436000000000213	0+0150456000000000313	0+0007836000000000413	0+0079406
0000000115	0+0155076000000000215	0+0150756000000000315	0+0009936000000000415	0+0054656
0000000117	0+0173146000000000217	0+0149376000000000317	0+0002976000000000417	0+0070206
0000000119	0+0172696000000000219	0+0150316000000000319	0+0014276000000000419	0+0066386
0000000121	0+0194376000000000221	0+0241406000000000321	0-0000506000000000421	0+0055516
0000000123	0+0215526000000000223	0+0223736000000000323	0+0012186000000000423	0+0081776
0000000125	0+0215606000000000225	0+0277986000000000325	0+0003516000000000425	0+0056116
0000000127	0+0227906000000000227	0+0274356000000000327	0+0012856000000000427	0+0070156
0000000129	0+0236316000000000229	0+0282186000000000329	0+0001826000000000429	0+0071676
0000000131	0+0111146000000000231	0+0278836000000000331	0-0013606000000000431	0+0058046
0000000133	0+0122626000000000233	0+0265576000000000333	0-0005226000000000433	0+0085926
0000000135	0+0166826000000000235	0+0270746000000000335	0-0021486000000000435	0+0059836
0000000137	0+0174596000000000237	0+0279536000000000337	0-0006266000000000437	0+0071666
0000000139	0+0185606000000000239	0+0280006000000000339	0-0020996000000000439	0+0077846
0000000141	0+0172356000000000241	0+0180606000000000341	0-0073876000000000441	0+0009316
0000000143	0+0172356000000000243	0+0180606000000000343	0-0073876000000000443	0+0009306
0000000145	0+0354606000000000245	0+0366786000000000345	0-0005906000000000445	0+0077886
0000000147	0+0539036000000000247	0+0554476000000000347	0+0062746000000000447	0+0147226

70. Test 208301015700

0000000206	3010157000000000357	0+0058125000000058	0+0021736000000059	0+0000116
0000000060	0+0010136000000061	0+0010105000000062	0+0010136000000063	0+0010166
0000000064	0+0073996000000065	0+0072296000000066	0+0065986000000067	0+0064306
0000000068	0+0061926000000069	0+0060446000000070	0+0056766000000071	0+0055486
0000000072	0+0054436000000073	0+0052906000000074	0+0062906000000075	0+0060856
0000000076	0+0055046000000077	0+0059006000000078	0+0063126000000079	0+0067616
0000000080	0+0053796000000081	0+0066176000000082	0+0056906000000083	0+0061936
0000000084	0+0057986000000085	0+0057756000000086	0+0063246000000087	0+0061186
0000000088	0+0060856000000089	0+0056316000000090	0+0057536000000091	0+0061836
0000000092	0+0054526000000093	0+0060656000000094	0+0055976000000095	0+0231486
0000000096	0+0060376000000097	0+0055916000000098	0+0060306000000099	0F0020713
0000000101	0+0172306000000201	0+0180566000000301	0-0073896000000401	0+0062466
0000000103	0+0157966000000203	0+0165556000000303	0-0073886000000403	0+0078986
0000000105	0+0171886000000205	0+0180196000000305	0-0044436000000405	0+0057676
0000000107	0+0150536000000207	0+0158146000000307	0-0037576000000407	0+0074596
0000000109	0+0133256000000209	0+0197676000000309	0-0036706000000409	0+0062966
0000000111	0+0144396000000211	0+0202006000000311	0+0020086000000411	0+0056656
0000000113	0+0145336000000213	0+0150326000000313	0+0007856000000413	0+0079196
0000000115	0+0155206000000215	0+0150706000000315	0+0009736000000415	0+0054426
0000000117	0+0173176000000217	0+0149256000000317	0+0002986000000417	0+0070346
0000000119	0+0172676000000219	0+0150185000000319	0+0014356000000419	0+0066346
0000000121	0+0194276000000221	0+0241516000000321	0-0000566000000421	0+0055836
0000000123	0+0216036000000223	0+0223606000000323	0+0012296000000423	0+0082006
0000000125	0+0215516000000225	0+0277976000000325	0+0003386000000425	0+0055996
0000000127	0+0227686000000227	0+0274446000000327	0+0012876000000427	0+0069926
0000000129	0+0236216000000229	0+0282256000000329	0+0001796000000429	0+0071776
0000000131	0+0111126000000231	0+0278796000000331	0-0013616000000431	0+0057986
0000000133	0+0122326000000233	0+0265646000000333	0-0005146000000433	0+0085676
0000000135	0+0166706000000235	0+0270846000000335	0-0021476000000435	0+0059786
0000000137	0+0174596000000237	0+0279666000000337	0-0007006000000437	0+0071796
0000000139	0+0185646000000239	0+0280116000000339	0-0020966000000439	0+0077406
0000000141	0+0172326000000241	0+0180586000000341	0-0073876000000441	0+0009286
0000000143	0+0172316000000243	0+0180586000000343	0-0073886000000443	0+0009256
0000000145	0+0354716000000245	0+0366816000000345	0-0005916000000445	0+0077876
0000000147	0+0539006000000247	0+0554516000000347	0+0062776000000447	0+0147226

71. Test 208301115500

0000000208	3011155000000000057	0+0057986000000000058	0+0021576000000000059	0+0000116
0000000060	0+0009996000000000061	0+0009956000000000062	0+0009976000000000063	0+0010016
0000000064	0+0073916000000000065	0+0072016000000000066	0+0065766000000000067	0+0064306
0000000068	0+0051956000000000069	0+0060406000000000070	0+0056516000000000071	0+0055336
0000000072	0+0054376000000000073	0+0052755000000000074	0+0062596000000000075	0+0061106
0000000076	0+0054936000000000077	0+0058846000000000078	0+0063286000000000079	0+0068046
0000000080	0+0059016000000000081	0+0066386000000000082	0+0056696000000000083	0+0062206
0000000084	0+0057556000000000085	0+0057896000000000086	0+0063156000000000087	0+0060706
0000000088	0+0061216000000000089	0+0055906000000000090	0+0057546000000000091	0+0061706
0000000092	0+0054276000000000093	0+0060626000000000094	0+0055666000000000095	0+0367386
0000000096	0+0059796000000000097	0+0055756000000000098	0+0059936000000000099	0F0020703
0000000101	0+0172376000000000201	0+0180666000000000301	0-0073866000000000401	0+0060026
0000000103	0+0157506000000000203	0+0165196000000000303	0-0073876000000000403	0+0078796
0000000105	0+0171936000000000205	0+0180146000000000305	0-0050976000000000405	0+0054526
0000000107	0+0150376000000000207	0+0158146000000000307	0-0038726000000000407	0+0074256
0000000109	0+0133046000000000209	0+0133916000000000309	0-0038666000000000409	0+0060216
0000000111	0+0144226000000000211	0+0187746000000000311	0+0021246000000000411	0+0054436
00000001	1+0145216000000000213	0+0150026000000000313	0+0007356000000000413	0+0078956
0000000115	0+0154996000000000215	0+0150576000000000315	0+0011606000000000415	0+0050536
0000000117	0+0173916000000000217	0+0149046000000000317	0+0002486000000000417	0+0070366
0000000119	0+0172746000000000219	0+0150216000000000319	0+0016066000000000419	0+0063126
0000000121	0+0193576000000000221	0+0243086000000000321	0-0001156000000000421	0+0053446
0000000123	0+0217466000000000223	0+0224876000000000323	0+0013786000000000423	0+0082006
0000000125	0+0214256000000000225	0+0270686000000000325	0+0003206000000000425	0+0051306
0000000127	0+0226626000000000227	0+0265926000000000327	0+0014456000000000427	0+0070736
0000000129	0+0238526000000000229	0+0275126000000000329	0+00 1286000000000429	0+0069476
0000000131	0+0111046000000000231	0+0272346000000000331	0-0015006000000000431	0+0056606
0000000133	0+0108406000000000233	0+0257776000000000333	0-0005506000000000433	0+0086866
0000000135	0+0154566000000000235	0+0262606000000000335	0-0023306000000000435	0+0054826
0000000137	0+0153846000000000237	0+0272606000000000337	0-0007196000000000437	0+0072596
0000000139	0+0173036000000000239	0+0273356000000000339	0-0023596000000000439	0+0075566
0000000141	0+0172376000000000241	0+0180646000000000341	0-0073886000000000441	0+0009326
0000000143	0+0172376000000000243	0+0180656000000000343	0-0073876000000000443	0+0009316
0000000145	0+0354686000000000245	0+0366826000000000345	0-0005886000000000445	0+0077926
0000000147	0+0538866000000000247	0+0554506000000000347	0+0062766000000000447	0+0147186

72. Test 208301115500

0000000208	3011155000000003057	0+0057926000000058	0+0021566000000059	0+0000126
0000000060	0+0009966000000061	0+0009936000000062	0+0009956000000063	0+0003966
0000000064	0+0073776000000065	0+0072016000000066	0+0065836000000067	0+0064276
0000000068	0+0061846000000069	0+0060286000000070	0+0055666000000071	0+0055396
0000000072	0+0054436000000073	0+0052896000000074	0+0062366000000075	0+0061186
0000000076	0+0054726000000077	0+0058846000000078	0+0063566000000079	0+0067996
0000000080	0+0059026000000081	0+0065336000000082	0+0056726000000083	0+0062316
0000000084	0+0057686000000085	0+0057916000000086	0+0063186000000087	0+0060816
0000000088	0+0061126000000089	0+0055396000000090	0+0057496000000091	0+0061696
0000000092	0+0054226000000093	0+0060586000000094	0+0055656000000095	0+0277256
0000000096	0+0059896000000097	0+0055846000000098	0+0059966000000099	0F0020703
0000000101	0+0172336000000201	0+0180606000000301	0-0073896000000401	0+0060166
0000000103	0+0157206000000203	0+0165136000000303	0-0073896000000403	0+0078386
0000000105	0+0171886000000205	0+0180156000000305	0-0050976000000405	0+0054276
0000000107	0+0150356000000207	0+0157986000000307	0-0038696000000407	0+0074066
0000000109	0+0133126000000209	0+0183946000000309	0-0038656000000409	0+0060186
0000000111	0+0144216000000211	0+0187816000000311	0+0021356000000411	0+0054346
0000000113	0+0145246000000213	0+0149986000000313	0+0007486000000413	0+0079016
0000000115	0+0154946000000215	0+0150566000000315	0+0011776000000415	0+0050696
0000000117	0+0174176000000217	0+0148946000000317	0+0002856000000417	0+0070956
0000000119	0+0172766000000219	0+0150116000000319	0+0016046000000419	0+0063516
0000000121	0+0194046000000221	0+0243426000000321	0-0000836000000421	0+0053716
0000000123	0+0217796000000223	0+0224736000000323	0+0013816000000423	0+0082016
0000000125	0+0215106000000225	0+0270716000000325	0+0003476000000425	0+0051396
0000000127	0+0226956000000227	0+0265016000000327	0+0014446000000427	0+0070666
0000000129	0+0238216000000229	0+0275196000000329	0+0001456000000429	0+0069556
0000000131	0+0111096000000231	0+0272176000000331	0-0014766000000431	0+0056626
0000000133	0+0108546000000233	0+0257546000000333	0-0005796000000433	0+0086876
0000000135	0+0154736000000235	0+0262566000000335	0-0022926000000435	0+0054746
0000000137	0+0164066000000237	0+0272566000000337	0-0006496000000437	0+0072496
0000000139	0+0173366000000239	0+0273426000000339	0-0023486000000439	0+0075626
0000000141	0+0172346000000241	0+0180616000000341	0-0073886000000441	0+0009296
0000000143	0+0172356000000243	0+0180626000000343	0-0073896000000443	0+0009296
0000000145	0+0354716000000245	0+0366856000000345	0-0005876000000445	0+0077916
0000000147	0+0538996000000247	0+0554586000000347	0+0062786000000447	0+0147226

73. Test 208301215100

0000000208	3012151000000000057	0+0057006000000058	0+0021686000000059	0+0000116
0000000060	0+0009916000000061	0+0009886000000062	0+0009906000000063	0+0009946
0000000064	0+0073676000000065	0+0072086000000066	0+0065756000000067	0+0064256
0000000068	0+0061996000000069	0+0060086000000070	0+0056616000000071	0+0055156
0000000072	0+0054396000000073	0+0052696000000074	0+0061096000000075	0+0062346
0000000076	0+0054496000000077	0+0059836000000078	0+0065076000000079	0+0069056
0000000080	0+0059906000000081	0+0066946000000082	0+0057086000000083	0+0063836
0000000084	0+0056756000000085	0+0058406000000086	0+0063306000000087	0+0059646
0000000088	0+0062156000000089	0+0054836000000090	0+0057386000000091	0+0062006
0000000092	0+0053696000000093	0+0061006000000094	0+0054896000000095	0+0376476
0000000096	0+0059176000000097	0+0055536000000098	0+0059336000000099	0F0020693
0000000101	0+0172356000000201	0+0180666000000301	0-0073886000000401	0+0054176
0000000103	0+0157276000000203	0+0165295000000303	0-0073886000000403	0+0075626
0000000105	0+0171896000000205	0+0180166000000305	0-0074616000000405	0+0045696
0000000107	0+0150206000000207	0+0158016000000307	0-0044616000000407	0+0075206
0000000109	0+0133026000000209	0+0149376000000309	0-0042186000000409	0+0051246
0000000111	0+0144116000000211	0+0152136000000311	0+0022216000000411	0+0047756
0000000113	0+0145096000000213	0+0149765000000313	0+0007206000000413	0+0074786
0000000115	0+0154796000000215	0+0150406000000315	0+0012886000000415	0+0040366
0000000117	0+0175026000000217	0+0148726000000317	0+0002226000000417	0+0071506
0000000119	0+0172796000000219	0+0150066000000319	0+0017556000000419	0+0052886
0000000121	0+0192546000000221	0+0244186000000321	0-0001396000000421	0+0047836
0000000123	0+0219716000000223	0+0225356000000323	0+0014846000000423	0+0078246
0000000125	0+0213746000000225	0+0246736000000325	0+0002526000000425	0+0039276
0000000127	0+0225466000000227	0+0240356000000327	0+0015706000000427	0+0072736
0000000129	0+0240476000000229	0+0251246000000329	0+0001066000000429	0+0058106
0000000131	0+0111166000000231	0+0248396000000331	0-0017366000000431	0+0054676
0000000133	0+0100736000000233	0+0231586000000333	0-0009646000000433	0+0083186
0000000135	0+0102946000000235	0+0235576000000335	0-0027336000000435	0+0042446
0000000137	0+0134686000000237	0+0248866000000337	0-0006276000000437	0+0075606
0000000139	0+0142496000000239	0+0250466000000339	0-0032366000000439	0+0064806
0000000141	0+0172376000000241	0+0180646000000341	0-0073896000000441	0+0009266
0000000143	0+0172376000000243	0+0180646000000343	0-0073896000000443	0+0009266
0000000145	0+0354616000000245	0+0365805000000345	0-0005916000000445	0+0077846
0000000147	0+0579066000000247	0+0554676000000347	0+0062816000000447	0+0147216

74. Test 208301215100

0000000208	301215100000000057	0+0057046000000058	0+0021656000000059	0+0000126
0000000060	0+0009926000000061	0+0009886000000062	0+0009916000000063	0+0009956
0000000064	0+0073706000000065	0+0071975000000066	0+0065766000000067	0+0064176
0000000068	0+0061846000000069	0+0050286000000070	0+0056606000000071	0+0055296
0000000072	0+0054446000000073	0+0052775000000074	0+0061176000000075	0+0062286
0000000076	0+0054486000000077	0+0059916000000078	0+0065186000000079	0+0069096
0000000080	0+0059916000000081	0+0065926000000082	0+0057026000000083	0+0063736
0000000084	0+0056706000000085	0+0058445000000086	0+0063336000000087	0+0059636
0000000088	0+0062226000000089	0+0054905000000090	0+0057286000000091	0+0062076
0000000092	0+0053706000000093	0+0061165000000094	0+0054856000000095	0+0285316
0000000096	0+0059146000000097	0+0055466000000098	0+0059316000000099	0F0020693
0000000101	0+0172336000000201	0+0180605000000301	0-0073896000000401	0+0054436
0000000103	0+0157476000000203	0+0165435000000303	0 0073906000000403	0+0075436
0000000105	0+0171926000000205	0+0180146000000305	0-0074696000000405	0+0045126
0000000107	0+0149946000000207	0+0157646000000307	0-0044426000000407	0+0074776
0000000109	0+0132906000000209	0+0149656000000309	0-0042256000000409	0+0051276
0000000111	0+0144046000000211	0+0152416000000311	0+0022026000000411	0+0047876
0000000113	0+0145136000000213	0+0149706000000313	0+0007376000000413	0+0074416
0000000115	0+0154766000000215	0+0150326000000315	0+0012636000000415	0+0040226
0000000117	0+0174736000000217	0+0148676000000317	0+0002236000000417	0+0071886
0000000119	0+0172796000000219	0+0149936000000319	0+0017206000000419	0+0053206
0000000121	0+0192826000000221	0+0243916000000321	0-0001216000000421	0+0048226
0000000123	0+0219546000000223	0+0225196000000323	0+0014676000000423	0+0077996
0000000125	0+0214306000000225	0+0246806000000325	0+0002626000000425	0+0039626
0000000127	0+0225926000000227	0+0240566000000327	0+0015476000000427	0+0072186
0000000129	0+0240306000000229	0+0251226000000329	0+0001326000000429	0+0058076
0000000131	0+0111086000000231	0+0248046000000331	0-0017756000000431	0+0054536
0000000133	0+0100706000000233	0+0231776000000333	0-0809656000000433	0+0082806
0000000135	0+0103716000000235	0+0236516000000335	0-0027636000000435	0+0042376
0000000137	0+0135016000000237	0+0248936000000337	0-0006796000000437	0+0075696
0000000139	0+0142776000000239	0+0250586000000339	0-0032246000000439	0+0064916
0000000141	0+0172456000000241	0+0180626000000341	0-0073896000000441	0+0009266
0000000143	0+0172356000000243	0+0180625000000343	0-0073906000000443	0+0009276
0000000145	0+0354646000000245	0+0365846000000345	0-0005916000000445	0+0077886
0000000147	0+0539016000000247	0+0554616000000347	0+0062746000000447	0+0147186

75. Test 208301314300

0000000208	3013143000000000057	0+0055146000000000058	0+0021646000000000059	0+0000116
0000000060	0+0010156000000000061	0+0010116000000000062	0+0010136000000000063	0+0010146
0000000064	0+0073896000000000065	0+0072156000000000066	0+0066086000000000067	0+0064396
0000000068	0+0062056000000000069	0+0060386000000000070	0+0056936000000000071	0+0055436
0000000072	0+0054646000000000073	0+0053026000000000074	0+0059706000000000075	0+0062416
0000000076	0+0055366000000000077	0+0060036000000000078	0+0067896000000000079	0+0070516
0000000080	0+0060526000000000081	0+0069066000000000082	0+0057336000000000083	0+0066796
0000000084	0+0054996000000000085	0+0058996000000000086	0+0065336000000000087	0+0057516
0000000088	0+0064336000000000089	0+0053926000000000090	0+0057076000000000091	0+0064056
0000000092	0+0054356000000000093	0+0063056000000000094	0+0054096000000000095	0+0337736
0000000096	0+0058596000000000097	0+0055756000000000098	0+0059666000000000099	0F0020693
0000000101	0+0172376000000000201	0+0180666000000000301	0-0073886000000000401	0+0050396
0000000103	0+0157366000000000203	0+0165276000000000303	0-0073886000000000403	0+0071326
0000000105	0+0171926000000000205	0+0180246000000000305	0-0075246000000000405	0+0033806
0000000107	0+0150376000000000207	0+0157946000000000307	0-0081056000000000407	0+0073026
0000000109	0+0133076000000000209	0+0106326000000000309	0-0059626000000000409	0+0041466
0000000111	0+0144106000000000211	0+0106776000000000311	0+0021376000000000411	0+0045106
0000000113	0+0145266000000000213	0+0149866000000000313	0+0007676000000000413	0+0068916
0000000115	0+0154916000000000215	0+0150516000000000315	0+0011926000000000415	0+0028856
0000000117	0+0174736000000000217	0+0148686000000000317	0+0002236000000000417	0+0071506
0000000119	0+0172796000000000219	0+0149826000000000319	0+0016506000000000419	0+0041456
0000000121	0+0193036000000000221	0+0243776000000000321	0-0000856000000000421	0+0043806
0000000123	0+0219166000000000223	0+0224736000000000323	0+0013946000000000423	0+0069356
0000000125	0+0214696000000000225	0+0214286000000000325	0+0002596000000000425	0+0027356
0000000127	0+0226096000000000227	0+0215126000000000327	0+0014886000000000427	0+0072396
0000000129	0+0239736000000000229	0+0219956000000000329	0+0001696000000000429	0+0042466
0000000131	0+0111006000000000231	0+0214456000000000331	0-0021706000000000431	0+0052156
0000000133	0+0100766000000000233	0+0199396000000000333	0-0018166000000000433	0+0074396
0000000135	0+0075186000000000235	0+0209986000000000335	0-0037626000000000435	0+0029246
0000000137	0+0066276000000000237	0+0218306000000000337	0-0010186000000000437	0+0073006
0000000139	0+0099776000000000239	0+0217266000000000339	0-0042756000000000439	0+0048256
0000000141	0+0172366000000000241	0+0180656000000000341	0-0073906000000000441	0+0009326
0000000143	0+0172366000000000243	0+0180556000000000343	0-0073906000000000443	0+0009326
0000000145	0+0354736000000000245	0+0366876000000000345	0-0005896000000000445	0+0077956
0000000147	0+0539096000000000247	0+0554606000000000347	0+0052806000000000447	0+0147306

76. Test 208301314300

0000000208	3013143000000008057	0+0056246000000058	0+0021706000000059	0+0000126
0000000060	0+0010206000000061	0+0010176000000062	0+0010186000000063	0+0010206
0000000064	0+0074076000000065	0+0072196000000066	0+0056076000000067	0+0064426
0000000068	0+0062186000000069	0+0060426000000070	0+0056986000000071	0+0055646
0000000072	0+0054706000000073	0+0053036000000074	0+0059756000000075	0+0062376
0000000076	0+0055436000000077	0+0060046000000078	0+0067816000000079	0+0070446
0000000080	0+0060566000000081	0+0068976000000082	0+0057386000000083	0+0066546
0000000084	0+0055066000000085	0+0059136000000086	0+0065426000000087	0+0057476
0000000088	0+0064406000000089	0+0053866000000090	0+0057136000000091	0+0063976
0000000092	0+0054336000000093	0+0063246000000094	0+0054136000000095	0+0258886
0000000096	0+0058596000000097	0+0055866000000098	0+0059746000000099	0F0020703
0000000101	0+0172336000000201	0+0180626000000301	0-0073906000000401	0+0050186
0000000103	0+0157266000000203	0+0165366000000303	0-0073906000000403	0+0071126
0000000105	0+0171936000000205	0+0180186000000305	0-0075296000000405	0+0033386
0000000107	0+0150206000000207	0+0157976000000307	0-0081116000000407	0+0073226
0000000109	0+0133076000000209	0+0106396000000309	0-0059496000000409	0+0041026
0000000111	0+0144176000000211	0+0106866000000311	0+0021416000000411	0+0044786
0000000113	0+0145156000000213	0+0149695000000313	0+0007676000000413	0+0067316
0000000115	0+0154816000000215	0+0150396000000315	0+0011556000000415	0+0028696
0000000117	0+0174776000000217	0+0148826000000317	0+0002186000000417	0+0071566
0000000119	0+0172856000000219	0+0149996000000319	0+0016646000000419	0+0041106
0000000121	0+0193326000000221	0+0244196000000321	0-0000626000000421	0+0043866
0000000123	0+0219566000000223	0+0224506000000323	0+0014066000000423	0+0069046
0000000125	0+0215126000000225	0+0214186000000325	0+0002516000000425	0+0027046
0000000127	0+0226246000000227	0+0214686000000327	0+0014846000000427	0+0072496
0000000129	0+0240026000000229	0+0219436000000329	0+0001916000000429	0+0042076
0000000131	0+0111056000000231	0+0214256000000331	0-0021386000000431	0+0051786
0000000133	0+0100826000000233	0+0199616000000333	0-0018726000000433	0+0074596
0000000135	0+0075196000000235	0+0209786000000335	0-0038006000000435	0+0029296
0000000137	0+0066416000000237	0+0217776000000337	0-0009686000000437	0+0073186
0000000139	0+0100196000000239	0+0216286000000339	0-0042696000000439	0+0047806
0000000141	0+0172356000000241	0+0180636000000341	0-0073906000000441	0+0009316
0000000143	0+0172356000000243	0+0180636000000343	0-0073906000000443	0+0009316
0000000145	0+0354716000000245	0+0366856000000345	0-0005956000000445	0+0077916
0000000147	0+0539126000000247	0+0554696000000347	0+0062786000000447	0+0147276

77. Test 208301413400

0000000208	301413400000000057	0+0055096000000058	0+0021756000000059	0+0000116
0000000050	0+0010076000000061	0+0010066000000062	0+0010076000000063	0+0010096
0000000064	0+0073956000000065	0+0072326000000066	0+0065956000000067	0+0064456
0000000058	0+0062116000000069	0+0060596000000070	0+0057006000000071	0+0055516
0000000072	0+0054666000000073	0+0053066000000074	0+0064306000000075	0+0063326
0000000076	0+0057606000000077	0+0062266000000078	0+0068716000000079	0+0071156
0000000080	0+0060996000000081	0+0069746000000082	0+0060156000000083	0+0067516
0000000084	0+0058916000000085	0+0058836000000086	0+0066016000000087	0+0062146
0000000088	0+0064976000000089	0+0056426000000090	0+0056116000000091	0+0064556
0000000092	0+0054446000000093	0+0063586000000094	0+0053326000000095	0+0354626
0000000096	0+0061056000000097	0+0055186000000098	0+0059846000000099	0F0020723
0000000101	0+0172376000000201	0+0180676000000301	0-0073886000000401	0+0038016
0000000103	0+0157156000000203	0+0165266000000303	0-0073896000000403	0+0062236
0000000105	0+0171966000000205	0+0180226000000305	0-0075436000000405	0+0038696
0000000107	0+0150326000000207	0+0158126000000307	0-0081356000000407	0+0062836
0000000109	0+0133056000000209	0+0064936000000309	0-0076316000000409	0+0037886
0000000111	0+0144156000000211	0+0064636000000311	0+0021956000000411	0+0033046
0000000113	0+0145086000000213	0+0149596000000313	0+0008316000000413	0+0059826
0000000115	0+0154916000000215	0+0150416000000315	0+0011776000000415	0+0029726
0000000117	0+0174926000000217	0+0148876000000317	0+0002676000000417	0+0060146
0000000119	0+0172856000000219	0+0149956000000319	0+0017236000000419	0+0036856
0000000121	0+0193326000000221	0+0244516000000321	0-0000086000000421	0+0030026
0000000123	0+0220146000000223	0+0224536000000323	0+0014446000000423	0+0059746
0000000125	0+0215526000000225	0+0199486000000325	0+0002806000000425	0+0025846
0000000127	0+0226096000000227	0+0185346000000327	0+0015566000000427	0+0061066
0000000129	0+0240696000000229	0+0197906000000329	0+0002216000000429	0+0036596
0000000131	0+0111076000000231	0+0189446000000331	0-0034656000000431	0+0035576
0000000133	0+0100916000000233	0+0185766000000333	0-0012776000000433	0+0066916
0000000135	0+0075246000000235	0+0134966000000335	0-0025296000000435	0+0031036
0000000137	0+0062826000000237	0+0193916000000337	0-0014006000000437	0+0066726
0000000139	0+0049146000000239	0+0191886000000339	0-0051056000000439	0+0044766
0000000141	0+0172366000000241	0+0180666000000341	0-0073906000000441	0+0009346
0000000143	0+0172376000000243	0+0130656000000343	0-0073906000000443	0+0009346
0000000145	0+0354686000000245	0+0365886000000345	0-0005906000000445	0+0077966
0000000147	0+0539186000000247	0+0554746000000347	0+0062816000000447	0+0147296

78. Test 208301413400

0000000208	3014134000000000057	0+0055136000000058	0+0021806000000059	0+0000116
0000000060	0+0010096000000061	0+0010056000000062	0+0010096000000063	0+0010116
0000000064	0+0074026000000065	0+0072206000000066	0+0066096000000067	0+0064636
0000000068	0+0062126000000069	0+0060546000000070	0+0057076000000071	0+0055586
0000000072	0+0054716000000073	0+0053046000000074	0+0064546000000075	0+0063536
0000000076	0+0057586000000077	0+0062256000000078	0+0068906000000079	0+0071056
0000000080	0+0050946000000081	0+0069736000000082	0+0060146000000083	0+0067696
0000000084	0+0058736000000085	0+0058796000000086	0+0066176000000087	0+0062186
0000000088	0+0064776000000089	0+0055286000000090	0+0056316000000091	0+0064596
0000000092	0+0054496000000093	0+0063706000000094	0+0053336000000095	0+0248906
0000000096	0+0061086000000097	0+0055156000000098	0+0059886000000099	0F0020723
0000000101	0+0172356000000201	0+0180626000000301	0-0073916000000401	0+0037956
0000000103	0+0157516000000203	0+0165626000000303	0-0073906000000403	0+0061456
0000000105	0+0171686000000205	0+0180186000000305	0-0075446000000405	0+0038526
0000000107	0+0150326000000207	0+0157986000000307	0-0081376000000407	0+0063366
0000000109	0+0133026000000209	0+0064566000000309	0-0075326000000409	0+0037806
0000000111	0+0144066000000211	0+0064326000000311	0+0021866000000411	0+0032476
0000000113	0+0145106000000213	0+0149746000000313	0+0008116000000413	0+0059826
0000000115	0+0154976000000215	0+0150286000000315	0+0011736000000415	0+0029546
0000000117	0+0174976000000217	0+0148786000000317	0+0002426000000417	0+0060746
0000000119	0+0172836000000219	0+0143916000000319	0+0017146000000419	0+0036986
0000000121	0+0193166000000221	0+0244456000000321	0-0000356000000421	0+0029716
0000000123	0+0220086000000223	0+0224326000000323	0+0014496000000423	0+0059256
0000000125	0+0214826000000225	0+0199806000000325	0+0002556000000425	0+0025836
0000000127	0+0225926000000227	0+0186456000000327	0+0015446000000427	0+0061346
0000000129	0+0240776000000229	0+0198006000000329	0+0002056000000429	0+0036226
0000000131	0+0111096000000231	0+0189426000000331	0-0035136000000431	0+0035056
0000000133	0+0100936000000233	0+0186926000000333	0-0012706000000433	0+0066936
0000000135	0+0075236000000235	0+0185376000000335	0-0025246000000435	0+0030636
0000000137	0+0062836000000237	0+0194076000000337	0-0015066000000437	0+0066436
0000000139	0+0048886000000239	0+0191706000000339	0-0050826000000439	0+0044436
0000000141	0+0172336000000241	0+0180646000000341	0-0073916000000441	0+0009326
0000000143	0+0172356000000243	0+0180636000000343	0-0073916000000443	0+0009316
0000000145	0+0354746000000245	0+0366886000000345	0-0005886000000445	0+0077936
0000000147	0+0539216000000247	0+0554796000000347	0+0062796000000447	0+0147316

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